School and Teacher's Dept.

The Elementary School Journal

Edited by THE FACULTY OF THE SCHOOL OF EDUCATION, THE UNIVERSITY OF CHICAGO, and published in conjunction with *The School Review and Supplementary Educational Monographs*

Volume XX DECEMBER, 1919 Number 4

TABLE OF CONTENTS

Educational News and Editorial Comment

The Duties of the School Principal . *Herbert S. Weet*

Methods of Improving the Technique of Teaching . . . . . *William S. Gray*

The Normal-School Curriculum . . . *H. A. Brown*

The Principal and Teachers' Methods of Ranking Pupils . . . . . *Leonard Power*

The Geneseo Scale of Qualities . . *John C. Reeder*

Sixth-Grade Science Projects . . *Bertha M. Parker*

Educational Writings:

I. Comment on Current Educational Publications

II. Publications Received

THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

THE ELEMENTARY SCHOOL JOURNAL

Articles to appear in forthcoming issues

HENRY C. MORRISON, School of Education, University of Chicago. *What Training Does the Superintendent Need in his Elementary Teachers?*

H. A. BROWN, State Normal School, Oshkosh, Wisconsin. *Professional Courses in the State Normal School.*

GERTRUDE FOLKS, National Child Labor Committee. *State Funds for Public Schools.*

FRANKLIN BOBBITT, School of Education, University of Chicago. *Mistakes Often Made by Principals.*

E. GEORGE PAYNE, Harris Teachers College, St. Louis, Missouri. *An Experiment in Education in Accident Prevention.*

CARLETON W. WASHBURNE, Superintendent of Schools, Winnetka, Illinois. *A Graduated Salary Schedule for Elementary Teachers.*

SAMUEL CHESTER PARKER, School of Education, University of Chicago. *Civic-Moral Teaching in French Secular Schools.*

THE ELEMENTARY SCHOOL JOURNAL is published monthly from September to June by the University of Chicago. ¶The subscription price is $1.50 per year; the price of single copies is 20 cents. Orders for service of less than a half-year will be charged at single-copy rate. ¶Postage is prepaid by the publishers on all orders from the United States, Mexico, Cuba, Porto Rico, Panama Canal Zone, Republic of Panama, Hawaiian Islands, Philippine Islands, Guam, Samoan Islands, Shanghai. ¶Postage is charged extra as follows: For Canada, 30 cents on annual subscriptions (total $1.80), on single copies 3 cents (total 23 cents): for all other countries in the Postal Union, 52 cents on annual subscriptions (total $2.02), on single copies 6 cents (total 26 cents). ¶Patrons are requested to make all remittances payable to the George Banta Publishing Company, in postal or express money orders or bank drafts.

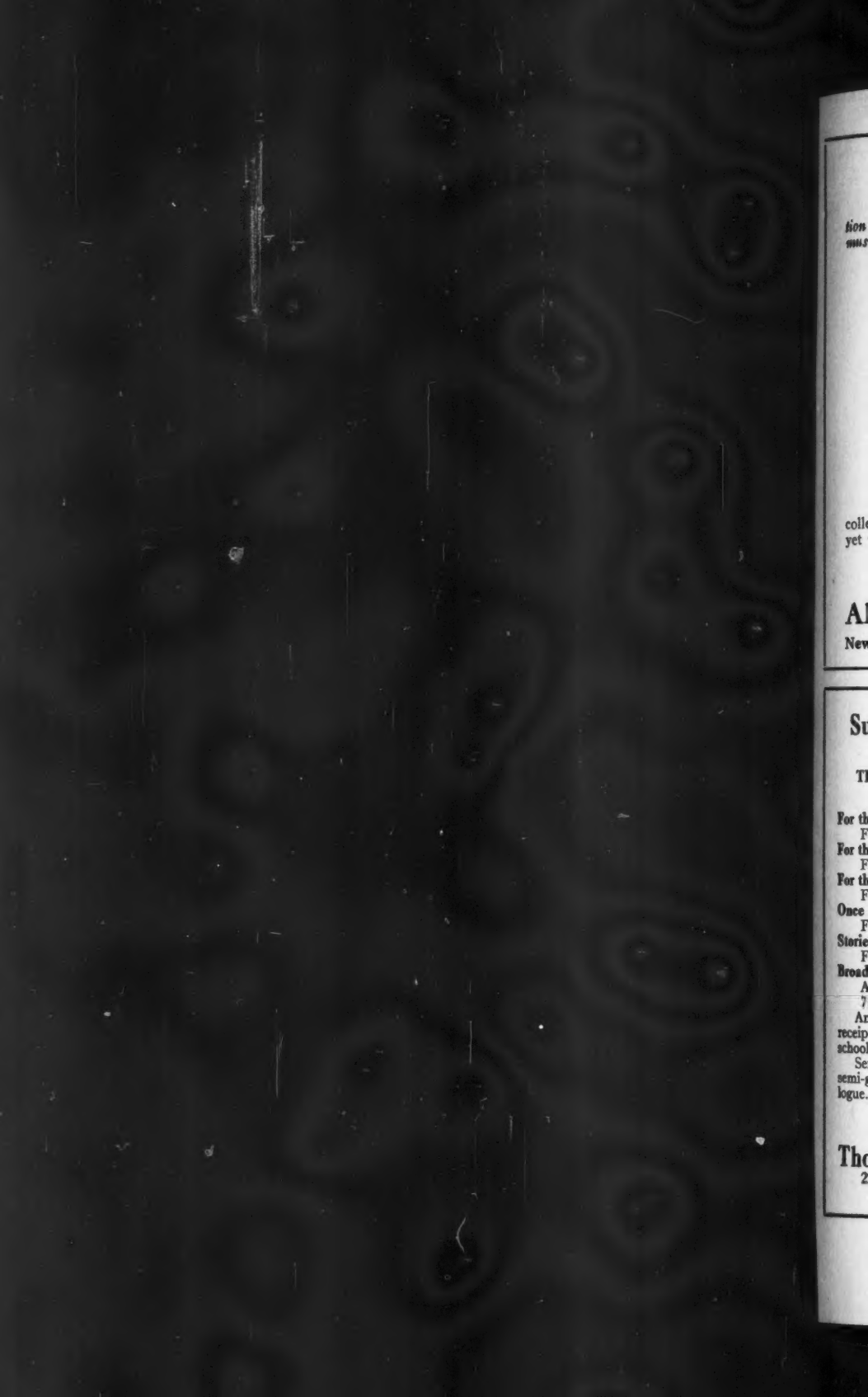
All special and combination rates formerly offered are withdrawn. Hereafter the Elementary School Journal will be supplied to subscribers only at the regular rate. Subscriptions to volumes of the Monographs will be received hereafter at a rate of $4.50 per volume but no reductions will be made for combinations. A complete announcement of the monographs will be sent on request.

Volume XX **DECEMBER, 1919** **Number 4**

$1.50 a Year - PUBLISHED MONTHLY EXCEPT JULY AND AUGUST - 20 Cents a Copy

Entered as second-class matter at the post-office at Menasha, Wis. Acceptance for mailing at the special rate of postage provided for in section 1103, Act of October 3, 1917, authorized March 18, 1919.

Address all communications regarding subscriptions to the George Banta Publishing Company, Menasha, Wis. All communications regarding editorial matters should be addressed to the Department of Education, University of Chicago, Chicago, Ill.



Denver Adopts Dann Music Course

Superintendent Carlos M. Cole's recommendation to the Denver Board of Education was based on the following report of the Committee appointed to investigate music books:

We wish to recommend the adoption of the Hollis Dann Series for these reasons:

1. The selection of material is unusually fine; the songs are simple and melodious; and the text of very high grade. The whole course seems designed to encourage pleasure in music and appreciation of its best forms.
2. The exercises are logical and given only where they are needed in teaching the songs.
3. Eye and ear training are definitely related and clearly presented.
4. The manual for teachers is a real inspiration, designed to interest even mediocre teachers in the subject. It very clearly maps out the work by months.
5. The collections of songs and games for kindergartens and first grades, and the Junior Song Book for the adolescent voices are ideal examples of beautiful song books as well as being adapted to the special needs.

There is no waste matter in the course. In fact, it seems to us the best related collection of interesting, singable material accompanied by concise teaching methods yet published.

LOUISE A. MERRILL.
EDITH I. HOOP.

AMERICAN BOOK COMPANY 330 EAST 22nd STREET CHICAGO, ILL.

New York Cincinnati Chicago Boston Atlanta

Supplementary Reading

THE BRADLEY QUALITY BOOKS
By Carolyn S. Bailey

For the Children's Hour, Book No. 1
For 1st and 2nd grades. Price, $.50
For the Children's Hour, Book No. II
For 2nd and 3rd grades. Price, $.60
For the Children's Hour, Book No. III
For the 3rd and 4th grades. Price $.60
Once Upon a Time Animal Stories
For the 3rd and 4th grades. Price $.60
Stories of Great Adventure
For the 6th and 7th grades. Price $.75
Broad Stripes and Bright Stars
American History Stories. For 6th, 7th and 8th grades. Price $.75

Any of above books sent postage paid on receipt of price. We make discount to schools on quantities.

Send for our special list of materials for semi-graded schools, also complete catalogue.

Northwestern agents of Milton-Bradley Co.

Thomas Charles Company
2249-53 Calumet Ave., Chicago, Ill.

SILENT READING

is successfully taught in

The New Barnes Readers

prepared by
Supt. Dressel Miss Robbins
Supt. Graff

The **only** series of Readers based on the silent reading method from the ground up.

The **first** series of Readers to provide a simple, effective plan for testing pupils' ability in reading.

Endorsed by leading educators

Adopted by the largest cities.

Primer, Books One and Two ready

Monograph on Silent Reading by Supt. Dressel free to teachers.

Do not fail to examine the New Barnes Readers

The A. S. Barnes Company
NEW YORK AND CHICAGO

THE COLLEGIATE PRESS

Is equipped to give its customers that which is increasingly required of the printing industry—the perfect combination of *Quality Work* with *Prompt Service.*

Especial attention is given to university publications, school directories, catalogs, annuals, forms and programs.

Fair specimens of its work are the following publications of the University of Chicago

THE SCHOOL REVIEW
THE ELEMENTARY SCHOOL JOURNAL
SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Correspondence is invited with buyers of printing who wish to obtain an intelligent understanding service which cannot be secured from the ordinary commercial printing plant.

The Collegiate Press
GEORGE BANTA PUBLISHING CO
MENASHA, WISCONSIN

MONOGRAPHS
For Teachers' Meetings

The problem of introducing teachers, especially those of limited experience, to good professional reading is a grave problem for every supervisory officer. The monographs which are announced in the advertising section of this journal furnish one solution of this problem. Principals and superintendents who have tried these monographs as the basis for teachers' meetings are enthusiastic about the results. Most people do not know what the scientific study of education really is. There is a vague, general enthusiasm for such study, but little actual attack on school problems by the ordinary teacher. The monographs show how scientific work has been done and suggest productive lines of work in reading, mathematics, penmanship, and other related lines.

Public School Methods

A Normal School on Your Desk

Made by the Nation's Greatest Educators and the Best-known Teaching Authorities.

THIS is the only complete professional help that has ever been prepared for the exclusive use of teachers. Daily, weekly and monthly lesson plans, together with methods, devices and material, are furnished for every grade from the kindergarten to and including the eighth. This work is especially helpful to superintendents when outlining their courses of study. Every grade teacher and supervisor should have access to this indispensable help.

See page 76, Sept. 1918, The Elementary School Journal

Write today for free brochure

On request we will be glad to send to any teacher or superintendent our thirty-six page brochure, containing specimen lessons, type studies and beautiful color plates from the work itself.

School Methods Co., Inc.
104 S. Michigan Avenue Chicago

New Words

Every teacher should be up to date and know the *new* words and how to pronounce them.

GREAT WAR	AIRCRAFT	AUTOMOBILE
fourth arm	empennage	convertible
camouflage	backswept	crank case
calibrate	Albatros	landaulet
blighty	squadron	cyclecar

"The Supreme Authority"

WEBSTER'S NEW INTERNATIONAL DICTIONARY

contains answers to questions about these *new* words and hundreds of thousands of other words. Where else is this information to be found? Ask for the *Merriam* Webster.

400,000 Vocabulary Terms. 30,000 Geographical Subjects. 12,000 Biographical Entries. 6,000 Illustrations and 2,700 Pages.

WRITE for Free Booklets to Teachers: "What Fun to Play Merriam-Dictionary Games," "Unlocks the Door," "Dog-Day Club."

G. & C. MERRIAM CO. Springfield, Mass., U. S. A.

Supplementary Educational Monographs

Edited and Published by the Department of Education of the University of Chicago

Volume III. A historical volume. (Complete volume, $4.50 postpaid.)

No. 1. Educational Legislation and Administration in the State of New York from 1777 to 1850. By Elsie Garland Hobson, Ph.D. Pp. x+268. Price $1.60, postpaid.

Chapters: Formative Influences; Origin and Early Development of the Dual System of School Control, 1784 to 1820; Education Under the Regents; The Common School System; Special Legislation for Cities; Support of Education; Education of Special Classes; Summary and Conclusions. Appendixes: Academies Incorporated, 1787 to 1850; Acts Granting Means of Support to Individual Academies; List of Miscellaneous Societies Incorporated before 1850 Having Some Educational Purpose; Chronological List of Titles and Dates of Laws Relative to Education, 1777 to 1850.

No. 2. The History of Educational Legislation in Ohio from 1803 to 1850.. By Edward Alanson Miller, Ph.D., Professor of Education, Oberlin College. (In press.)

Chapters: The Sources of Ohio's Public School System; The Development of the Public School System; The Public School Lands; Secondary and Higher Education; The Education of Defectives, Dependents, and Delinquents; The Training of Teachers; Supplementary Educational Agencies; Conclusion. Appendixes: A Classified Collection and Abstract of the Educational Legislation of the Period, 1803–50; A Page and Volume Index to all Educational Legislation in the Session Laws of Ohio from 1803 to 1850. Bibliography.

No. 3. Development of High-School Curricula in the North Central States. By John Elbert Stout, Ph.D., Professor of Education, Cornell College, Iowa. (In press.)

Chapters: Introduction: The Early High-School Movement. Part I, Development in Subjects and in Curricula Organization: Similarity in General Plan and Lack of Uniformity in Details of Curricula; Representative Courses of Study; Number of Courses Offered, Titles and Organization; Subjects Included in Curricula; Constants and Variables; Variations in Time Devoted to Fields and Subjects; Influence of Size and Location of Schools. Part II, Conditions and Changes in Subject-Matter: Introductory, Mathematics; English; The Sciences; The Social Studies; Foreign Language and Miscellaneous Subjects. Part III, Recent Developments: Organization of Curricula and Range of Subjects; Changes in Subject-Matter; Summary. Appendix: Tables A-J. Bibliography.

No. 4. The History of Educational Legislation in Mississippi from 1798 to 1860. By William H. Weathersby, Ph.D., Professor of Education, Mississippi College. (In press.)

Chapters: Influences Affecting Educational Legislation in Mississippi; The General Tendencies and Characteristics of Educational Legislation in Mississippi before 1860; Educational Beginnings—Legislation of the Territorial Period; Elementary Education, from 1817 to 1846—The Sixteenth Sections and the Township Schools; Elementary Education from 1846 to 1860—The First School System and the Multiplication of "Systems"; Secondary Education from 1817 to 1860—The Mississippi Academies; Higher Education in Mississippi from 1817 to 1860; Educational Legislation for Special Classes and for Special Purposes; Supplementary Educational Agencies; The Administration and Supervision of Schools and the Certification of Teachers; Federal and State Aid to Education. Appendixes: Abstract of State Legislation Concerning School Lands, The Sixteenth Section Fund and the Literary Fund; Abstract of State Legislation Concerning Common Schools from 1846 to 1860; Abstract of Charters of Academies and Other Secondary Schools; Complete Index to Educational Legislation in Mississippi from 1802 to 1860 by Titles of Acts.

For a complete announcement of the *Supplementary Educational Monographs* address the

GEORGE BANTA PUBLISHING COMPANY
Menasha, Wisconsin

THE ELEMENTARY SCHOOL JOURNAL

Continuing "The Elementary School Teacher"

VOLUME XX DECEMBER, 1919 NUMBER 4

Educational News and Editorial Comment

THE CHICAGO SUPERINTENDENCY

On November 8, 1919, the Circuit Court of Illinois handed down a decision that Mr. Charles E. Chadsey was legally elected in March last to a term of four years as superintendent of the schools of Chicago, and that all subsequent actions taken to place anyone in the superintendency are illegal and void. The city administration and the board of education attempted by every means in their power to blockade the operation of this decision. The *Chicago Tribune* contained on the day following this decision the following statement which was evidently inspired:

The *Elementary School Journal* is published monthly from September to June by the University of Chicago. It is edited and managed by the Department of Education as one of a series of educational publications. The series, including also the *School Review* and the *Supplementary Educational Monographs* is under a joint editorial committee and covers the whole field of educational interests.

JOINT EDITORIAL COMMITTEE

CHARLES HUBBARD JUDD, *Chairman*
SAMUEL CHESTER PARKER
JOHN FRANKLIN BOBBITT
HENRY CLINTON MORRISON

Articles and editorials of the *School Review*
ROLLO LA VERNE LYMAN
MORTON SNYDER

Reviews
HAROLD ORDWAY RUGG
ROLLA MILTON TRYON

Articles and editorials of the *Elementary School Journal*
FRANK NUGENT FREEMAN
HARRY ORRIN GILLET

Supplementary Educational Monographs
WILLIAM SCOTT GRAY
MARCUS WILSON JERNEGAN

Corporation Counsel Ettelson went into conference with Mayor Thompson shortly after news of Judge Scanlan's decision reached the city hall. When he emerged he announced, "Everything that can be done lawfully to keep Mr. Chadsey out of the superintendency will be done."

If all legal remedies fail to keep Mr. Chadsey out it is understood that an offer will be made to pay him his salary to date if he will resign.

Failing in this, men close to the board said yesterday that "for the good of the school children" the board would be justified in making the $18,000 job so uncomfortable for Mr. Chadsey that he would prefer to resign.

It is to be noted from this item that the city administration frankly has taken charge of the schools. The board of education cuts little or no figure in the decisions made with regard to school policies. The man who has been illegally acting as superintendent of schools declared himself repeatedly as willing to accept without reservation any attitude that the board of education might assume. He thus abandoned entirely the rights that were supposed to be conferred upon the highest officer of the school system by the law of 1917. That law provides explicitly that the superintendent of schools shall have rights and powers which make him in a large measure independent of the board. It also provides that he shall be the leader of the school system in all technical matters. It is quite unnecessary to review in a journal of this type the fundamental legal principle that the board of education in turn should have been in its actions and decisions entirely independent of city hall politics. The Chicago board did not at any time assert its rights as a state board of education, and its decisions, as indicated, have been entirely under the control of the mayor and his immediate advisers.

The situation came to a climax when all of these agencies, in obedience to the behest of the city hall, carried the case to the Appellate Court of the state. A stay was asked for, which would prevent Mr. Chadsey from assuming his rightful and legal position as superintendent of schools. Mr. Chadsey and his attorney generously granted their opponents enough time to prepare a case for presentation to the Appellate Court.

On Wednesday, November 12, the Appellate Court took up the matter and in a decision so clear and emphatic that there can be no doubt as to their judgment with regard to the whole performance refused absolutely to consider a stay of the decision of the trial court. In rendering their decision the Appellate Court used no

uncertain language. They declared that the findings of the trial court were entirely in keeping with all of the decisions and pronouncements of the Supreme Court and went so far as to anticipate any possible later hearings of the matter by saying that in the opinion of the court no modification would at any point ever be made in the findings of the court that they reinstate Mr. Chadsey.

The Appellate Court then went out of its way to take up the argument which had been presented by the city hall party to the effect that the restoration of Mr. Chadsey would result in chaos in the schools. The court described this argument as sinister and empty. It pointed out emphatically the expert character of Mr. Chadsey and his record of efficient service in the public schools of the United States. It also went so far as to point out the obligation of the Chicago board of education under its oath of office to co-operate with the superintendent in the conduct of the schools.

The extent to which the Appellate Court went out of its way to close the whole issue was a source of great satisfaction to all who have been interested in the reign of law and order in this matter. The mayor and his counselors, with the connivance of the board of education and their appointed officers, have made the most vigorous effort to obstruct the operation of the law that has ever been witnessed in an American city. They have resorted to every device of propaganda among the teachers and misrepresentation of the facts before the public. They have done everything that they could to make the situation difficult and impossible for Mr. Chadsey as an officer in the Chicago schools.

Mr. Chadsey in the meantime has borne himself with a degree of dignity and impartiality to the interests of the schools which must be recognized as indicative of the highest professional ideals and character. His complete and unqualified vindication before the Appellate Court gives some hope that the petty and malicious political manipulations of the Chicago schools cannot continue indefinitely.

Mr. Chadsey has resigned his position as dean of the College of Education of the University of Illinois and has taken up the duties of the superintendent's office. He has indicated his intention of making a report to the board of education at its next meeting. This report will outline a series of progressive policies which public opinion will certainly force the board to adopt.

This issue of the *Elementary School Journal* goes to press too early to give Mr. Chadsey's statement to the board. In a later issue of the *School Review* or of the *Elementary School Journal* the statement will be given in full.

SHALL TEACHERS BE PARTISAN?

There is published in the city of Minneapolis a periodical called *Federation News*. The November issue contains an editorial entitled "Neutrality." The editorial is as follows:

> The question between labor and capital is essentially a question of democracy and autocracy. It is essentially not a consideration of more pay and shorter hours but a consideration whether the few or the many shall control the conditions of industry. Behind the dissatisfactions and the demands and the dark forbodings of the past and present lies the great yearning of democracy as it did in the pre-natal days of the American Revolution and French Revolution. Toward the development of this democracy, we, as teachers, may fondly imagine ourselves as onlookers or neutrals. In spite of the gains of labor, we are still living under the dominance of capitalistic ideas. Were we living under the dominance of neither, we might be neutral. The order of today, is a compound of the concessions of the employers of the world and the gains of the employees of the world, gains that no employer even, because of the increased production, would wish to destroy. Yet, were labor to be satisfied today, and did it feel that its entire battle were won, very little more progress along the line of industrial democracy would be made. The capitalistic order is still the order of the day. By being forced to submit to it, we lose our neutrality. We of the Federation believe in the divine right of laborers. Since ours is not a position of neutrality, we prefer to cast our lot, not with those who wish to cherish a pupa stage of democratic government, but with those who are seeking to realize a true interpretation of democracy.

This editorial truly represents the fundamental doctrines of the Teachers' Federation. This organization asks members of the teaching profession to become strictly partisan. They are to take sides and to "battle" with a well-defined group of citizens.

It is well that the issue be made as clear as possible. For our own part we do not believe that the teaching profession should be partisan in its beliefs on social matters. The very principles of our profession cry out against an alliance of public servants with any class of citizens. The verdict of Boston against those who attempted to prostitute public service to selfish and partisan ends is the verdict to which a sober second thought will bring teachers and school officers of all grades. The schools of this country are in an

overwhelming degree the common meeting grounds of all classes of people. We are the one nation in the world which has had the resources and the spirit to make all grades of education free and easily accessible to all classes of people. The teacher of the American public school is a professional leader, not a narrow partisan. There will be lapses from this high ideal. There may be for a time some tendency in radical quarters to organize along partisan lines. All of the inducements that can be offered in the way of promises of personal rewards will doubtless be used in the effort to make teachers partisan, but in the long run the sound American sense of the teaching profession will prevail. It is safe to predict that the Federation cannot flourish if it preaches as its doctrine that which this editorial advocates.

Immediately after the editorial quoted above appears the following:

The dramatic withdrawal of Gompers from the Industrial Conference both strengthens and weakens him in the eyes of labor. For some time opposed by many for his conservatism he emerges from weeks of contest over the principle of collective bargaining with the respect of 3,000,000 members of the American Federation of Labor who have seen him battle bravely against Garyism and its menace and who have deeply appreciated his loyalty to their interests in a most critical time. At the same time workmen must appreciate the fact that his conservatism has availed Mr. Gompers very little. The very men who were pronounced in their praise of him during the war and who promised his followers that he would lead them to greater results than they could hope to attain through other means rejected his conciliatory proposals, and, as he says, drove him from the conference. The issue is now clear. No longer must Garyism be allowed to divide its opponents. Instead, they must solidify their forces by effecting a closer union without giving up craft organizations. They must devise a system of interchangeable cards by which engineer and plumber and mine-worker and teamster and factory-girl and teacher can enter into the spirit of one another's unions and understand one another's aim. Thus a block will be formed to withstand by resistless force the encroachment of reactionary capital. Only by such a close organization of all workers can the nation be saved from industrial disturbance. England points the way. Will Gompers listen and continue to lead?

CHILD LABOR DAY

For the past thirteen years the observance of Child Labor Day has been nation-wide. As a matter of fact, three days are observed—Saturday by synagogues, Sunday by churches and Sunday schools, and Monday by secular schools and clubs. Last year, magazines, newspapers, churches, libraries, schools, and colleges helped us secure wider observance of the day.

This quotation from a letter from the National Child Labor Committee, 105 East Twenty-Second Street, New York City, calls attention once more to the necessity of keeping steadily before the American people the importance of protecting children against exploitation. Child Labor Day is set for January 25, 1920, and all who are willing to co-operate in its observance can secure materials and suggestions by writing to the committee.

REQUEST FOR INFORMATION ABOUT OPPORTUNITY SCHOOLS

Public schools have recognized for some time the problem of the mentally deficient pupil. Special classes have been organized for the segregation of such pupils for special types of training, and much attention has been given to methods of discovering them. It is now coming to be recognized that there are as many pupils who are superior to the general mass as there are pupils who are inferior and that the problem of adequately providing suitable training for these pupils is as important as the provision for defective pupils. Progress in organizing such provision is being made, and the experience which is thus being acquired should be available to others who are planning similar innovations. Such experience will indicate the need and value of provision for gifted pupils, the methods which are best adapted for their training, and the difficulties which are met with and ways of overcoming them. To make such experience generally available an article will be published during the year in the *Elementary School Journal* summarizing the attempts along this line. This note is written as an invitation to any of the readers of this journal who may know of such an experiment to send a brief description to F. N. Freeman, School of Education, University of Chicago.

HOT LUNCHEON IN RURAL SCHOOLS

The University of Wisconsin supplies the following information:

In the 6,601 rural schools in Wisconsin about 80 per cent of the children are eating a cold lunch at noon. In only 1,393 schools in the state is there a hot dish prepared at the school.

The why of the hot lunch is explained by Miss Gladys Stillman, extension worker for the home economics department of the University, in this way:

Serving a hot dish at noon to supplement the cold lunch brought from home helps the children to accomplish better school work. The pupils show better health. Better digestion is encouraged by the hot food. Better table manners

result and better selection of food may be taught. The hot lunch will help diminish the 4,000,000 cases of malnutrition in the United States and the large number of tuberculosis victims in Wisconsin.

Different schools provide the hot lunch by different ways of financing. Sometimes the school board finances it; sometimes some interested patron of the school does it. Women's clubs may donate the food or the money, or the school may give an entertainment or box supper to earn the money. A mothers' meeting which arranges for the providing of food by individual families has also been tried. In some schools the board supplies the equipment and the food material comes from some one of the other sources. It has been found that the best plans are the first two, financing by school board or by some school patron.

INTELLIGENCE TESTS OF OLD PEOPLE

Dr. Beeson of the Colorado State Teachers College has made an investigation in a new field by applying general intelligence tests to old people. His statement of his investigation and its results is as follows:

I tested twenty of the inmates varying in age from about 70 to 93. The results of the tests throw interesting light upon the decline of intelligence during senescence. Of course, these were a somewhat selected class. The inmates of any old peoples' home would hardly be typical representatives of the ages. It is not likely that the most intelligent people, nor even a great many people of average intelligence, should finally become dependent upon public charity; yet the investigation showed that some of the inmates were even at this advanced age above the average adult in mental ability. However, this home was not a county almshouse or a public institution, but a private home which is very careful of the people admitted to it. A detailed investigation of each case is made before it is received into the home. For this reason the inmates of such an institution are far more nearly typical of the average old person than we should be likely to find in county or city poorhouses.

The results of the tests show that the average medium old person tested has a mentality of 13 years and three months, as compared with 16 for the average adult. The intelligence quotient was 82.5 as compared with 100 for the average adult. That means a decline of about 17 per cent during senescence, if we assume that these inmates are practically typical old people. Assuming that they are selected, and lower than the average, the decline of typical old people would be considerably less than 17 per cent. Those engaged in mental work and those who read and think a good deal probably decline very much less, and very much less rapidly, than those without occupation or those engaged only in physical work. Mental activity seems to retard the decline at senescence.

Such studies are needed so that we may know just at what age old people usually become unfit for service. According to the Carnegie pension system teachers and professors are pensioned at sixty-five, and this age is not chosen because of any psychological reason; it is an arbitrary decision. We should know at what age intelligence declines so markedly as to render the average person unfit for industrial, business, or professional work.

READING IN ROCHESTER

The school system of Rochester, New York, is a good example of the effects of enthusiasm for the scientific study of educational problems. The whole system from the superintendent down is at work on the improvement of teaching. Believing that reading is the most important of the school subjects, special emphasis is being given to this subject. Conferences to which principals and teachers contribute are being held. There is no spirit of anxiety of the sort which sometimes appears when surveys are on, but there is the keenest interest in tests and their results, and in new methods of work. A great deal of exchange of experiences is being accomplished through demonstrations and mimeographed material.

One example out of the many which Assistant Superintendent O'Hern supplied the writer may be given as illustrating the kind of demonstration prepared by teachers as a part of the general plan. This is a demonstration by Miss Clara D. Taylor of silent reading with a 4B grade.

I. Aims: This lesson was given to demonstrate how the silent-reading lesson in the fourth grade might be simulated by the teacher and evaluated.
   1. Teacher's aims in this particular lesson were
      a) to tell part of the story in such an interesting way that the children would want to read the end of the story;
      b) to find out by questioning how much of the story the children comprehended.
   2. Pupil's aim was to find out how the story ended.

II. Subject matter: Story of "The Monkey and The Crocodile" from the supplementary reader called *Jataka Tales*.

III. Lesson plan:
   1. Introduction—Teacher introduced the new book *Jataka Tales*, as the fairy tales of India, and told the children the name of the story she was to tell. [NOTE. The children were given a short description of the crocodile. As this was the only new word in the lesson, a word drill was not necessary.]
   2. Teacher told the first part of the story, stopping at a particularly interesting point and thus stimulated a motive for the children to read the rest of the story silently.
   3. Children read the rest of the story silently, then closed their books quietly, and sat in rest position until the others had finished. They were allowed a reasonable length of time for the silent reading but one or two were not able to finish the story in the time allowed.
   4. Oral reproduction—two or three children were asked to tell the end of the story.
   5. Questions—these may be written on slips of paper to be given to the children or written upon the board. The following questions were

selected because they represent different ways of testing the comprehension.

a) How many times was the monkey caught by the crocodile? Tell about one of his plans of escape.
b) Why was the crocodile called a stupid crocodile?
c) Why did the monkey decide to ride to the island on the crocodile's back?
d) Look on page 6 and read the paragraphs which tell what the monkey did in order that he might live in peace.
e) What did the crocodile say to the monkey after the monkey had escaped the second time?
f) What did the monkey say in reply?
g) Was the monkey wise or foolish? Give reasons for your answer.
h) Select the part of the story you liked best.

IV. Inferences to be drawn from this lesson:

1. This lesson was more of a test than a reading lesson and should be used when the teacher wishes to test the grade in comprehension.
2. Some children read more rapidly than others and therefore probably comprehended more of the story.
3. Some of the children were hindered by the mechanics of reading and therefore did not comprehend as much of the story as the more rapid readers did. This suggests special work for fourth grade children who, because they are good in other subjects, have not been held back because they are poor readers.
4. One child did not understand what the printed question asked her to do. This may suggest that more opportunity should be given the child to look for specified paragraphs and sentences or to follow certain directions in writing, as this will later lead to reference work.
5. In some lessons it would be better to present the questions before the silent reading in order that the children may be looking for the answers while reading.
6. This type of a lesson might be a test of attention and memory.

AN ADVERTISEMENT OF EDUCATIONAL FILMS

It is not often that we allow ambitious advertisers to use this section of the *Elementary School Journal*. The following paragraphs are quoted, however, with good conscience. They summarize discussions which have come to the editors in increasing numbers in the last few months and they announce a unique commercial experiment which will be of large interest to school people.

Time was, not so long ago either, when education and "movies" were worlds apart. In those days learning always meant "book-learnin." Today the use of educational films is a commonplace of every campaign in the education of public opinion. In our schools alone, where educational films would seem to be most necessary, they are still almost unknown. But the cause of this lies, not with teacher, principal, or school board—they have all come to realize fully

what a help it would be to have graphic, concrete pictures of the subject under discussion—but with the prohibitively high cost of equipment. For, in addition to the original high price that must be paid for a large projection machine, the fire laws require the erection of a fireproof booth, which means another big outlay of money and space, and an expert must be paid to run the films. The total cost naturally has been too great for all but the very wealthiest schools.

In spite of the expense involved, more schools would probably have adopted the film method were it not for a difficulty inherent in the films themselves. Most so-called educational films are really commercial films minus the story-telling element, and even those which are based upon some text are designed to serve as illustrations rather than as an integral part of the teaching method.

Realizing the immense and heretofore undeveloped possibilities in the screen method of instruction, one of our leading publishers of school and college texts and the world's largest maker of educational films have joined in the production of a new type of film. Each one of the films of this joint organization will have the expert editorial supervision of D. Appleton and Company and the expert technical production of the Educational Department of the Universal Film Manufacturing Company, and will constitute a complete survey of the subject presented, visualizing accurately in logical sequence and correct pedagogical manner the material of Appleton texts.

There are a number of unusual features about these films which, by the way, are to be known as Appleton-Universal Films, but the point which is sure to interest educators most is the pedagogical correctness with which the textbook material is visualized for students. Heretofore educational films have been most desultory in their treatment of the subject to be studied, and even when a specific text was followed it was picturized in a way that isolated it from all other sides of the subject.

Appleton-Universal Films will treat all subjects in logical sequence, following the spirit and method of the text upon which they are based and making the necessary correlations with other portions of the field. The authors who wrote the Appleton texts used will in most cases supervise the productions personally, and each film, before its release, will be approved by the author to see that it conforms in every detail to the original text. Among the authors whose books are to be given early film productions of their texts are such experts as David Starr Jordan and Vernon L. Kellogg, authors of many standard zoölogy texts, Mrs. Gertrude Van Duyn Southworth, author of several texts in American history, and John M. Coulter, the distinguished botanical expert.

Plans are now under way for the filming of all of Appleton's texts to the end that the entire field of elementary, high-school, and college subjects will be visualized upon the screen. So ambitious a project, however, will take time for its realization according to the exacting standards set for Appleton-Universal Films. A preliminary survey of the main educational field has therefore been made, and those subjects which seemed most urgently to demand visual presentation have been chosen for immediate production. These first Appleton-Universal Films will include United States history, ancient and modern European history, physical and commercial geography, zoölogy, chemistry, physics, geology, and bookkeeping.

News Items from the School of Education of the University of Chicago

PRELIMINARY ANNOUNCEMENT OF THE CHICAGO DINNER

The annual University of Chicago Dinner which occurs each year during the week of the meeting of the Department of Superintendence of the National Education Association will be held at 6:30 P.M., Tuesday, February 24, 1920, in the Statler Hotel, Cleveland, Ohio.

Anyone who has attended the University, either during summer quarters or the academic year, is most cordially invited. A more detailed announcement of the dinner will be made in the next issue of the *Elementary School Journal*. A preliminary announcement is made at this time in order that all interested may reserve the date.

VOLUME III OF THE SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Volume III of the *Supplementary Educational Monographs* deals exclusively with problems related to the history of American education. Inasmuch as all of the materials for these monographs are now printed or ready for the printer, opportunity is taken at this time to present to the readers of the *Elementary School Journal* a somewhat detailed statement of the purpose and content of these numbers of the monographs.

Three of the monographs are concerned with the history of the educational legislation of the states of New York, Ohio, and Mississippi up to 1850. The plan and purpose of these studies are set forth in the general introduction to the volume of New York. Briefly stated, the purpose is as follows: We have forty-eight independent public-school systems, exhibiting many important variations which can be traced to early periods in our history. One of the chief sources of the systems is the educational legislation passed by the individual states relative to every type of institution in which instruction was given. The older states had developed their educational systems to such an extent by 1850 that the main outlines of the present systems are quite clear at this date. States formed at a later period, those west of the Mississippi River, based their educational legislation very largely on that of the older states.

It is obvious that an exact knowledge of the legislation of these states is of great importance if we are to understand the evolution of the various public-school systems. Owing to the fact that the data have been quite inaccessible, our knowledge of this legislation is very incomplete. Moreover, very few detailed studies have been made of this body of material. It is the purpose of this series to supply, in part, this gap in our knowledge. It is intended that every act or portion of an act bearing on public or private education shall be recorded and that the legislation shall be analyzed and made intelligible to the average reader in chapters that set forth the general factors that account for the legislation, its characteristic features, the relation of the state to administration, support, teachers, curriculum, and other features, including elementary, secondary, and higher institutions. Other chapters, varying with individual states, deal with special types of legislation involving such subjects as the origin and development of city systems, the management of land grants for education, the relation of the state to special classes of public educational institutions and to private institutions as shown in the charters granted or acts established. Appendixes contain complete lists with titles of the acts, and with exact references to the sources where each may be found, abstracts of the charters of colleges, academies, and other types of institutions, abstracts of legislation concerning school lands and funds, common-school acts and other similar data.

It is clear that this type of educational history will supply facts for interpreting and modifying present school practice, and will aid greatly in throwing light on our social, religious, economic, and political history.

The fourth monograph in this volume differs in character but is of unusual importance. In this period of reconstruction it is necessary that we have a clear idea and accurate data in respect to the evolution of the curriculum of our public secondary schools. The material for the important states of the North Central area is now brought together for the first time under the title "Development of High-School Curricula in the North Central States." This study is an important aid in formulating new and modifying old high-school courses.

A complete list of the chapter titles of all numbers of this volume of the monograph series appears in the advertising section.

THE DUTIES OF THE SCHOOL PRINCIPAL

HERBERT S. WEET
Superintendent of Schools, Rochester, New York

In the light of the increased demands which are coming upon the public schools in the days that are ahead, the topic under discussion is one that may well be considered. It would be difficult to find any feature of school organization in which a greater range of varying practices is to be found than the one suggested by this subject. The easy thing to do and the very natural thing to do is to continue perpetuating the kind of organization which we have had in the past. The exceedingly difficult thing to do is to face the future and so readjust our school organization as most effectively to meet its needs. No single problem in this connection is more important than that which has to do with the place of the principal in the organization of the elementary school.

First of all no discussion of the duties of a principal will be of much value that does not establish at the outset the relation that should exist between the principal and central school authorities. Every duty prescribed for the principal implies working conditions that make possible the proper discharge of that duty.

Not many years ago a superintendent of schools, who had had a large and successful experience, stated that the greatest problem of the superintendent was that of knowing how actually to get things accomplished in the several schools in view of the fact that each school had a principal through whom the superintendent was obliged to work. This very adequately expresses one conception of the relation of the principal to central school authorities. All the wisdom is found at the center and the great problem consists in knowing how to get this wisdom to the circumference through these non-conductors—the school principals. Having had an experience of upwards of ten years in principalship work, I was by no means ready to accept such an evaluation of the duties of the principal as was implied in this statement. Today, after an equal length of time as a superintendent of schools, I am farther than ever from accepting

it. More and more it seems to me that we must work to the principle of expecting and providing for an initiative and a leadership from the elementary school principal that the above conception absolutely ignores. It is no argument whatever to claim that elementary-school principals at the present time are unequal to strong, constructive educational leadership. As a rule they have not been selected for such a task, they have not been working under conditions that brought out to the full their inherent powers, and they have not been paid salaries that made it possible for them to enter the larger fields of study and training required. Not infrequently, even in comparatively large systems, the principal of the school is essentially a teacher. Minor time arrangements are made for him to adjust matters of discipline, to make requisitions for supplies, and to prepare the required reports. In so far as the prime aim for such an arrangement is to keep the principal in close touch with actual teaching processes, the end is commendable. But it is a mistaken policy. The principal of an elementary school who is allowed anything like fair working conditions will gain a better and a truer knowledge of teaching processes through sympathetically and constructively observing and working with his teachers than through all the classroom teaching which he can possibly do.

Do we believe, then, that the principal of an elementary school should be privileged and required to exercise initiative and leadership, or do we believe that his duties are confined largely to carrying out the orders of central school authorities? In one sense this is the crux of the whole question. It is our own belief that our elementary schools cannot be made to approximate their full power except as we expect this leadership from the principal and make provision for it. Central supervision, valuable as it is when rightly done, can never solve the problem. Many systems have been increasingly working toward a realization of all that this conception of the principal implies. They have relieved him from all teaching. They have provided, so far as conditions have made it possible, some clerical help for routine matters. They have increased salaries to the point where they are now in a position to command real leadership on the part of elementary-school principals. They have, in some cases, provided the individual school with a wide-awake and experienced teacher who can give her whole time, under the direction of the principal, to studying the real educational problems

of the school and of the community. In these and in other ways they have increasingly recognized that the great function of the school superintendent is not to direct principals but to secure for them, to the very limit of his power, the conditions required for enabling them to work out the problems of their schools. In no place, however, have the implications of this conception been fully realized. But a discussion of this subject at the present time has no place if it is wholly or even largely confined to a formulation of existing practices. Its only merit will be in suggesting the type of thing toward which we need to work.

The great fundamental duty of the principal is to make of his school an institution in which, to the greatest extent possible, the real ends of public education in this country of ours are being realized. We shall not all be ready to accept this. We would agree that the real ends of public education, as we are more and more clearly coming to see them, are to produce young men and women who will catch the clearest possible conception of their duties in a democracy like ours, who will go out with a will to meet and accept those duties, and who will have the physical, mental, and moral strength required to discharge them. But to claim that the responsibility for realizing these ends rests so largely upon the principal of the school is a claim which will at once be challenged. It implies a degree of *initiative* and *leadership* on the part of the elementary-school principal which in common practice we do not expect and we do not make possible.

It is obviously impossible, within the space limit of this paper, to do more than sketch some of the major duties that grow out of this one fundamental obligation of the school principal. All such duties, however, may be comprehended under two general heads. The first will embrace those three fields of thought in which the principal must work if he is to have that essential knowledge required for conducting a really effective school.

Every school has the lives of its boys and girls with their need for training and consequent development along physical, mental, and moral lines. The laws of this development form the great constant of school activity. The fundamental physical powers are the same in principle in all children and the laws by which those powers are developed are the same for all ages. At least in theory and increasingly in practice, we are coming to accept the proposition that no

matter what the angle may be from which we view the function of the public school, it must concern itself very directly and consciously with the physical and moral, as well as with the mental life of the child. Positive physical health as opposed to freedom from disease has not yet taken possession of us as an end in school life, but the time is very rapidly coming when this will be a goal. In other words, the public school will be approximating its full power when it is developing each child to something like the full, all-round stature of that child. But even this statement implies what we all know to exist, a vast difference in degrees of potential development. Our special classes for various types of children are a very frank recognition through our school organization that these limitations exist. More and more as we come to know the laws in each sphere of development and work in accordance with those laws, we shall come to something like an approach to the development of each child to to the limit of its capacity. But, nevertheless, there is a limit. Furthermore, these powers are affected for better or for worse by many other agencies than the school, and the school is affecting through these children many other individuals than the child itself. All this simply means that one duty of the principal is to be the leader in the most intelligent and comprehensive study possible of the needs, capacities, and limitations of the pupils of his school. No intelligent or comprehensive search can be made to discover these factors without a knowledge of the home and the community conditions. The time is rapidly passing when the individual school will confine itself simply to formal teaching processes in large mass units to the children who come within its doors. One of the comprehensive and significant duties of the principal, then, is to know the capacities and limitations of the pupils of his school, to know the laws by which these constant powers are to be developed, and to know the nature of the influence which outside home and community life are having upon this development to the end that they may be reinforced or offset as the case may be by the influence of the school.

The school not only has the lives of these boys and girls with their need for development, but it also has its definitely organized body of knowledge which is to play its part in that development. This is clearly one of the important variables. The extent to which it is made a constant, however, in courses of study as they are

formulated and in textbooks as they have been published, is only too well known. As we face the future of public education in this country, who can estimate the value of this variable in the so-called work of reconstruction? Is the organized body of knowledge that is being used by the school for the training and development of these children precisely the body that ought to be used in each case? Never since the days of Herbert Spencer has the question, "What knowledge is of most worth?" had so important a bearing on our public-school procedure as it has today. What knowledge is of most worth in history, whether that history be the simple historical elements of our own country or the more advanced types of history that are to be found in our secondary schools? Is this knowledge to continue to be so unrelated to our own country and to our own personal problems as it has been in the past? What is to be the organized body of knowledge which can be most intelligently and effectively used for this work of developing the physical body? These and questions of a similar type are to be of even greater importance in the future than they have been in the past. We may very properly regard it as the never-ending study of relative values. If our principal is to be privileged and required to exercise that initiative and leadership needed to make of his school an institution in which, to the greatest degree possible, the ends of public education are being realized, then, one of his major duties is bound to be that of pursuing the subject suggested in this connection. And the important thing is not so much that the principal shall have reached any particular degree of accomplishment in this field as it is that he shall be actually conscious of this as one of his duties and that he shall keep up a sustained interest in a study of this particular field.

But, we have as a third factor our ways of procedure in which this organized body of knowledge is to be used by the teacher in accomplishing the ends of education in her work with the children. Is a given teacher, through her methods of instruction, actually securing the training values which the subject or topic has, or is she simply engaged in that process which is so easily recognized, the process of transferring certain knowledge to the end that a given examination may be passed? Of course, no one would claim that even this successful transfer can be made without resulting in the exercise and consequent development of certain powers of the

growing child. But is the process simply reaching one power, or is the teacher conscious of the various powers not only that can be reached but that must be reached if the knowledge is either to serve its real purpose as knowledge, or to bring that growth through the exercise involved in securing and assimilating it? In other words, methods of procedure in the use of every factor of the schoolroom that bears upon the education of the child constitute the third great field out of which a multitude of detailed duties grow. The teacher's method of housekeeping, her methods of discipline, her methods of imparting instruction, in short, her methods of using all the materials of the school in this work of education must be a subject the responsibility for becoming familiar with which rests upon the principal as the leader of the school.

To some one or more of these three factors, then, we must relate every duty that the principal of the school has so far as the essentials of knowledge are concerned. Even under the most favorable conditions there will be many things to interrupt him in his search in these fields. On his part, however, there should and must be the disposition to regard no other accomplishment as compensating for his failure to make progress along these three lines. And on our part we owe it to him to make the conditions of his work as favorable as we can possibly make them, and to remember that no other one of our accomplishments can compensate for our failure to give just this assistance to the principal in every possible way. This help we shall give through central supervision whose great work it is to assist by bringing to the individual school that wisdom from the larger field which the principal brings to the individual teacher. We shall help by reducing so far as we can, consistently, the multitude of demands made by the central office and by granting some clerical assistance for the fulfilling of such demands as must necessarily be made. We shall help by releasing, from time to time, that conspicuously strong teacher in his building, whom principal and teachers alike respect and follow, to study the elements required for progress in each of these three great fields, and to assist in making progress in these and in other ways. In short, we shall be on the alert to make the working conditions of the principal as favorable as local resources make possible.

It would be a mistake to suppose that the above discussion implies that the only person in the school upon whom a respon-

sibility rests for knowing the needs of pupils and studying the factors involved in their education is the principal of the school. But it is true that in this work the school principal is the leader and that as a rule there will be nothing like representative and systematic study of these problems on the part of teachers except as the principal is leading. This is the most natural thing in the world, for as a rule our teachers are consciously striving to reach the standards set by the principal of the school if only the principal by his own industry and sincerity is ready to take the lead. But if the securing of an increasingly strong grasp on each of the three factors above referred to is a duty of the school principal, and if that grasp is valueless except as it is used under his leadership for realizing the ends of education in his school, then another field of duties must grow out of his relations to those with whom he is directly related in this work of leadership—the teachers of the school. Here again, his great fundamental duty, and the one from which many detailed duties emerge, is to develop the teachers under his charge into strong, capable teachers, and to keep alive within them the desire for professional growth. Every teacher who goes into the school building to take up teaching as a vocation has a right to expect the kind of help that will develop her into a strong and capable teacher and that will keep alive within her the desire for professional growth. And it is the plain duty of the principal, primarily, to see that this right is respected. The whole defense of our graded salary schedule is to be found in the fact that a certain period of time is required for the inexperienced teacher to develop professionally through actual experience in the classroom. The one absolutely indispensable factor in this development is the right kind of a principal. When the teacher's right and his duty in this regard are properly met, the community will have an effective school. There is a prevailing tendency on the part of principals to expect that the teachers who come to their buildings shall be completely finished products. This is no different in principle, however, from the tendency of the teacher to expect all the pupils of the grade which she receives to be trained according to her standards, or the tendency of the superintendent to expect that the principals whom he selects shall be so trained and experienced as to require none of his time or assistance.

Among the duties which grow out of the proper discharge of this one fundamental duty are some that are very obvious and yet experience, nevertheless, shows the need of keeping them before us. First of all there is the duty of frankness. It is safe to say that practically all the embarrassing situations and strained relations that often develop between the principal of a school and the teacher whose work he questions occur out of the failure at the very outset to discharge this simple duty of frankness. It is, furthermore, the business of the principal to take the initiative in establishing this relation of a frank interchange of opinion between principal and teacher. For the principal to assume that the teacher will come to him when troubles arise for which she needs to come, or only when he summons her for adverse criticism, is to pave the way at the very outset for a most improper discharge of this fundamental duty of developing teachers. This matter of being frank, and yet, at the same time, of so convincing the individual of your desire to help that the frankness does not hurt, is a delicate task. But it is a task that can be performed, and in the great majority of cases will be performed, if the principal at the very outset establishes the right working relations with the individual teacher by a frank discussion of what the working conditions are to be. Again the principal owes it to the teacher to sense her needs and not ignore the fact that she has needs except as she may take the initiative in coming to present them. There is something wrong either with the principal or with the conditions under which he is obliged to work if he cannot, through his daily contact with the teacher in the classroom, sense her need of help with reference to some feature of method, or an understanding of some part of the curriculum, or other equally essential things. As he must sense these needs, so he must know how to meet them. Someone has said, in substance, that next in value to knowing a thing is knowing where to find it. Practically every city school, and certainly every city school system in which the working conditions have been at all favorable, has in its actual teaching force all the wisdom required for bringing that school or system to a high degree of excellence if only adequate means can be found of detecting that wisdom, organizing it, and thereby making it available, and then inspiring teachers with a desire to use such contributions. But if this working relation of sympathetic frankness has been established, and if the principal is constantly

reinforcing the consciousness of the teacher with his desire to help by sensing her needs through the kind of observation which his daily contact with her makes possible, then there will be no doubt as to the desire of the teacher to use such contributions as the principal may bring. He should then know where in his building to look for the help with which to meet these varying needs for the professional development of the teacher. He should, furthermore, know where in the system to look for this kind of help. This knowledge will come through his regarding visits to other schools in the system not simply as a privilege, but as a duty. It will, furthermore, come through central supervision, for as the principal brings to the individual teacher the experience gained from the larger field of the school, so central supervision will bring to the principal the experience gained from the larger field of the system.

There is one other duty which the principal has to his teachers and that is to protect them from the incompetent teacher who lacks either the ability or disposition to grow out of her incompetence. The great body of our teachers are loyal men and women. They are devoted to their tasks and they are rendering a service to the community which is bound to be increasingly appreciated as the days go on. Such a body of teachers in any school have a right to be protected from the weak and the incompetent, who are a gross injustice to the boys and girls in their grade and who reflect discredit upon the teaching group with which they are allied. It seldom happens, of course, when any principal has either the power of determining the teachers who shall come into his school or the formal right of terminating the services of the weak and the incompetent. But the principal is the only person who through daily contact knows the history of the individual and who, therefore, knows how properly to interpret the work of any teacher for a given hour or day in terms of that history rather than as an isolated event. The call of the future is for the type of principal who is able to meet this most important responsibility and for working conditions that will make it possible for him to exercise the responsibility imposed.

In concluding it seems necessary once more to call attention to the fact that this discussion is aimed to be neither a simple formulation of existing practices nor a visionary scheme impossible of fulfilment. These are certainly the two extremes which all of us

would wish to avoid. But more and more the great body of our children are being educated in our city centers. In some way we must remove the handicap that so often comes to this city center after it has attained a certain size. How large can a school be and yet have its work effectively done? How large can a city be and yet have effective schools? Of course, there is no answer to either question because of the varying factors that enter. In so far, however, as we look to central supervision as the great and practically only power for unifying and in other ways keeping our schools effective, we are doomed to disappointment. This does not, in the least, underestimate the highly important and indispensable service which central supervision must render. By the very nature of the case, however, if we enlarge that supervision to the point where we have anything like a sufficient staff to establish the close working relations with teachers that are essential for intelligent and constructive leadership, we shall enlarge it to the point where we have one of the general type represented by the principal in each and every school. And this is precisely the supervising principal whose place and duties we have been attempting to discuss.

METHODS OF IMPROVING THE TECHNIQUE OF TEACHING[1]

WILLIAM S. GRAY
School of Education, University of Chicago

The demand that supervisors increase materially the amount of time and thought which they give to the improvement of classroom teaching has become so insistent that it cannot be disregarded. It finds justification in the fact that the results of instruction frequently prove to be inadequate when they are subjected to careful scrutiny or to scientific tests. Progressive supervisors in various parts of the country have recognized the validity of this demand and they have been making detailed studies of the methods which can be used in improving the technique of teaching. As a result numerous methods and devices have been developed which are suggestive and, in many cases, genuinely effective. It is the purpose of this discussion to describe in considerable detail some of the methods which are employed by supervisors in improving the quality of teaching.

In order to determine how supervisors aid their teachers the following questions were presented to approximately two hundred elementary-school teachers in June of the current year: (1) Name briefly five ways in which your principal or superintendent helped you last year with teaching problems. (2) Describe in detail the most helpful plan or device which was used. (3) How frequently did your superintendent and principal visit you? (4) In what ways did they make their visits of value to you? (5) What were some of the teaching problems on which you received no advice or suggestions but in connection with which you were in genuine need of help?

The replies which were received indicated that approximately one-half the teachers had not received detailed help on their classroom problems. Two explanations for this situation were frequently offered in the reports. The first indicated that supervisors are absorbed in routine and administrative problems and as a result

[1] Delivered on July 15, 1919, as one of the lectures of Superintendents' Week at the University of Chicago.

have no time for personal contact with classroom problems. The second indicated that supervisors are not intimately acquainted with classroom procedure and are therefore unable to offer appropriate suggestions when they visit the classroom. The first explanation justifies the demand that the supervisor change radically his point of view concerning supervision, or that he readjust his program so that more time is provided for the supervision of classroom work. The second explanation justifies the following demand made by one of the teachers who participated in the investigation:

> Only those men and women should be appointed as supervisors who are intimately acquainted with the problems and practices of the classroom, who are intelligently critical of what they observe, who are suggestive and constructive in their discussions of teaching problems, who are genuinely interested in the content and methods of instruction, and who consider the activities of the classroom the most important problems in a school system for study and investigation.

Perhaps all will not agree with the statement in the form in which it was made. There can be no objection, however, to the demand that if supervisors do not already possess these qualities they should continue their study and training until they become intelligent, constructive critics of classroom teaching.

The significant replies which were received organized themselves about six kinds of activities in which supervisors engage to improve the quality of instruction: (1) methods used in developing an intelligent view of teaching problems; (2) types of teachers' meetings and conferences; (3) care and forethought in supplying material equipment which is prerequisite to effective teaching; (4) the supervisor's procedure in visiting recitations; (5) methods of making these visits of value to teachers; (6) the use of tests in improving instruction. In addition to the foregoing a list of problems was prepared on which teachers expressed a need for help.

The reports indicated that supervisors devote a large amount of time to the development of an intelligent view of classroom problems among their teachers. This is in harmony with an accepted principle of supervision which has been stated in the following terms:

> Expert supervision should lead teachers to an intelligent view of teaching problems, to a broad range of classroom experience so that the work of one grade may be seen in relation to the work of other grades, and to an understanding of needed revisions, of necessary growth on the part of teachers, and of the final outcomes of instruction.

It is a matter of first importance that supervisors keep their teachers informed in regard to the latest developments in the field of methodology and classroom technique. The teacher in service needs information concerning changing conceptions in regard to teaching, and she needs suggestions concerning new and effective devices which she can employ to advantage. The use of tests in improving instruction is one of the more recent developments in classroom technique concerning which teachers in service need instruction. Teachers who are just beginning their work in a system need an additional type of help. They frequently come with a narrow view of teaching problems or with a background of teaching experience which differs radically from the point of view adopted by a supervisor and his teachers. For illustration, a teacher who teaches by memoriter methods will retard the progress of pupils in a system which emphasizes problem-solving. All teachers should consider from time to time appropriate quantitative and qualitative standards of classroom work inasmuch as progress in a school system will be most rapid and effective when all the teachers work together consistently toward clearly defined and highly desirable ends. The supervisor is the co-ordinating force in a school system who should endeavor to develop unity in the aims and purposes of the various units, and who should keep alive the spirit of investigation in regard to problems of teaching.

The methods which are employed by supervisors to secure these ends vary widely. One method was described by a teacher in the following terms:

> Our superintendent is a very progressive man. He attends all the educational meetings that he can, and he reads the latest educational books and current literature. He calls his teachers together frequently to discuss with them significant contributions relating to their teaching problems. He gives us references and illustrations and suggests experiments for us to try in the classroom. The result is we are kept constantly informed in regard to new and better methods of teaching and are stimulated to do our own work better and more thoroughly.

A second teacher made the following statements:

> Our principal describes to us from time to time specific illustrations of effective teaching, and he discusses with us constantly the newest methods and devices brought out by research. He describes how we can improve our own teaching through the use of such devices. After these suggestions have been tried in several classrooms the teachers meet to discuss the results.

Teachers commented frequently on the value of the following methods. Supervisors provide a professional library in the school system with duplicate copies, or they arrange with the city library to secure valuable professional texts in duplicate. Few teachers can afford an extensive professional library. If they are to come in contact with significant discussions of teaching problems supervisors must take steps to provide professional books, survey reports, and reports of experimental investigations for their use. I recently visited the library of a progressive city of several hundred thousand for the purpose of securing lists of available references on classroom problems. To my surprise I found but very few modern references in the field of teaching. On inquiry I learned that the library had a large fund available for books and reports in the field of education but that the librarians were unable to secure lists of significant references from the teachers of the city. This is a striking illustration of the failure of supervisors to provide their teachers with an abundance of professional literature with no expenditure and with little time or effort.

Frequent mention was made in the reports of the fact that the professional reading of the year centered about specific problems in methodology, such as how to stimulate reflective thinking, how to conduct a drill lesson, how to teach reading or writing, and how to teach pupils to study effectively. In preparation for reading of this type bibliographies were prepared and distributed to teachers in mimeographed form. The fact that bibliographies were prepared for the teachers economized their time and effort and enabled them to do far more effective work than otherwise in the few hours each week which they have for professional reading. The teachers frequently commented on the fact that readings which centered about the solution of some interesting classroom problem were far more significant and helpful than the usual type of reading circle work.

Mimeographed letters or bulletins sent regularly to teachers are used to distinct advantage in stimulating constructive effort among teachers and in directing their attention to significant problems. Miss Sarah Imboden, supervisor of the elementary grades, Decatur Illinois, sent a letter to her teachers last September, excerpts of which follow. After a few words of greeting to the teachers she said

> Our major emphasis this year will be placed upon—
> 1. Training pupils how to study.

2. The socialized recitation.
3. The problem attack in teaching.

Much good work along these lines has already been done, I am sure, by many of you. We need, however, to gather together our experiences through discussion, through concrete demonstration, and through grade and group meetings in order that all may profit to the maximum.

As soon as the routine work of the first few days is out of the way I advise that the course of study be read with great care. This is of vital importance and applies as much to those who feel they know the work because of several years of experience in a given grade as to the new teachers in a grade or the system.

The general introduction for each subject should be studied intelligently and thoughtfully that each teacher may have a general perspective of the work as a whole and that she may see how the work assigned to her grade fits into the general course.

Best results in teaching cannot be secured unless we have definite objective ends in view and clearly defined methods of employing them.

The work of the semester needs to be systematically planned into large units, the relative value of each determined, and the necessary time allotment apportioned.

The time required for any given unit will vary with the classes. An arbitrarily defined time allotment for all is perhaps unwise as the work should largely be determined by one's mode of attack and the capacities and interests of the pupils. I shall be glad to help you in this as well as in making out your permanent programs, if you desire such help.

Teachers' meetings provide excellent opportunities for stimulating keen interest in, and an intelligent view of, teaching problems. A large number of teachers reported that their supervisors did not believe in teachers' meetings. As a result no general conferences were held during the year. On the other hand, teachers' meetings were mentioned in many reports as the most helpful method employed by the supervisor to improve the quality of the teaching. Five types of group meetings were mentioned: (1) general teachers' meetings in which a specific classroom problem is discussed in detail; (2) inter-grade meetings in which the problems peculiar to two or three grades are discussed; (3) grade meetings in which detailed plans for meeting grade problems are considered; (4) meetings of special teachers to discuss problems peculiar to their subjects; (5) committee meetings in which to work constructively on some problem or to hear significant reports in regard to work which has been completed.

The following statements made by the teachers give evidence of the value of these meetings:

1. The committee work is the most helpful device used by my principal in improving instruction. Several teachers work together in co-operation with the principal on some problem of vital interest to them and in many cases to all the faculty. In the latter case reports are discussed in faculty meetings and action taken upon them.

2. The superintendent holds grade meetings frequently. We are asked to send in questions or problems for discussion on which we want help. These problems are always discussed in great detail.

3. A voluntary meeting is held each Wednesday afternoon which is attended by all teachers who have special problems or difficulties. These problems are discussed by the teachers and supervisors in a most careful and helpful way.

4. On the last Saturday of each month a teachers' institute is held. Helpful books are studied, classroom problems are discussed, and suggestive lectures are given. These meetings prove effective in stimulating constructive effort among teachers concerning their classroom problems.

The value of co-operative work among teachers and supervisors on aims, content of courses, and methods of teaching was emphasized frequently as a means of developing a comprehensive view of classroom problems. An outstanding illustration in this connection is the co-operative study in curriculum-making which was undertaken by Superintendent H. B. Wilson and the teachers under his supervision in Topeka, Kansas. The purpose of the study was to define significant problems for study in geography in each grade. Problems were to be found which make a strong appeal to pupils and at the same time belong together in a progressive sequence. Numerous problems which had already proved more or less effective in the respective grades were assembled. These were thoroughly discussed and organized in the form of a tentative outline. The teachers made use of the outline in an experimental study of the various problems which were proposed. As experimentation continued, the tentative course was modified and refined along those lines suggested by the investigations. Throughout the period of this co-operative study the teachers served as creative agents in the reorganization of the course of study. This type of constructive effort is not only a means of enriching the course of study and adapting it to the needs of particular schools, but it is also a significant means of securing intelligent insight on the part of teachers into the problems of instruction. Each supervisor should provide frequent opportunity for this type of co-operative effort on the part of teachers both for the specific contribution which it makes in terms of improved courses of study and better methods of teaching

and for the professional interest and growth which is stimulated among teachers when they are permitted to do a piece of constructive work.

An adequate supply of appropriate equipment, reference material, etc., is prerequisite to effective teaching. Many teachers reported that their supervisors give personal attention to problems of equipment, supplying them with supplementary textbooks, reference materials, pictures, laboratory equipment, appropriate desks, etc. A majority of the teachers stated that their supplies of such materials were wholly inadequate and the quality of the classroom work suffered as a result. Reading, for illustration, cannot be taught effectively without appropriate types of reading materials. The short selections contained in most readers are not adequate for project-reading or for teaching pupils to study effectively. Geography cannot be taught adequately without an abundance of illustrative materials. If classroom instruction is to improve as conceptions of teaching change, it is important that supervisors supply teachers with the best equipment possible. I recently visited a school system in which the supervisor was enthusiastic about the problem method of instruction. He had instructed his teachers fully as to the importance of this type of teaching. In no building, however, did I find that teachers had been supplied with the kind or amount of reading materials which are necessary if instruction based on problem-solving is to be carried on effectively. Many supervisors generously tell teachers that they will supply them with anything that they want. The teachers choose as wisely as they can from their limited knowledge of the various possibilities. In many cases far more effective equipment would have been requested had the teacher known of other available materials. It is the function of the supervisor to set up machinery which will bring to his office samples or descriptions of valuable materials for use in the classroom and which will make these available for the use of teachers as rapidly as possible.

One of the most impartial and effective means of improving the quality of teaching is the constant use of tests as a routine part of instruction. In this connection supervisors find it necessary to provide systematic training and instruction for teachers. The following methods were frequently mentioned in the reports. Conferences are held in which teachers are instructed concerning the

purposes and values of tests, and are trained to use them effectively through discussion, demonstration, and use. The use of tests is begun in one or two buildings under the immediate supervision of the principal or superintendent. As the teachers of these schools become more or less expert they are relieved of some of their responsibilities so that they can instruct the teachers in other buildings. This plan has been employed successfully in Rochester, New York. As soon as teachers develop skill in the intelligent use of tests they are encouraged to adopt them as a routine part of their work. The supervisor serves in this connection as a progressive leader in securing results along several lines. Definite standards of accomplishment are determined and adopted. Teachers are instructed concerning major points of emphasis for the system as a whole and for specific schools and grades. The results of tests are thoroughly discussed so that accurate interpretations of their significance can be made. The supervisor holds himself responsible for assembling the scientific material which relates to the problems under consideration, and for their presentation and interpretation to the teaching staff. Provision is made for the frequent discussion of studies which have been made by teachers within the system. Every possible opportunity is utilized to stimulate interest on the part of teachers in making detailed studies of their problems. The most significant results which come from the intelligent use of tests are renewed interest in teaching problems and the spirit of investigation which is developed. The teacher who scrutinizes her work carefully and records accurately becomes more open-minded, more interested in adequate proofs, and less willing to follow the line of least resistance by accepting blindly all things on authority. It is unnecessary to add that such an attitude is fundamental and important if genuine progress is to be made in the improvement of teaching.

The use of tests furnishes evidence that the results of teaching are relatively good or poor. The next step in an adequate scheme of supervision is to determine the extent to which the methods and devices employed by the teacher are appropriate and economical. A teacher who secures results above the average may be doing so at the expense of time and energy through the use of poor methods of teaching. In order to acquaint themselves with the methods which are used by teachers, supervisors make frequent observations of classroom teaching. In this connection a clear distinction should be

made between the administrative and the pedagogical functions of a supervisor. In his pedagogical function the supervisor must be democratic, open-minded, and impartial, and he must serve as a leader or teacher of teachers rather than as a dictator. Inasmuch as methods of teaching are undergoing radical reorganization at the present time he must refrain from assuming that the teacher is the only one to take the learning attitude. On the other hand, the supervisor should be recognized as a persistent, open-minded student of improved methods of teaching.

The reports which were submitted indicate that there is wide variation among supervisors in the frequency with which they visit teachers. Some teachers are visited almost daily and other teachers are visited very infrequently. On the average, teachers are visited once a month by superintendents and once a week by principals.

The procedure followed by supervisors when visiting classrooms differs as widely as the frequency of their visits. Some devote their time wholly to routine matters; some talk to the pupils or conduct a recitation, and others observe the technique employed by the teacher. It is evident that supervisors must give a large amount of attention to teaching problems if the technique of teaching is to be radically improved. Observations are frequently made primarily for the purpose of becoming acquainted with the work of various teachers. It is important that a supervisor familiarize himself early in the year with the quality of the teaching which each teacher in the system is doing. After the first month, however, observations will be much more effective if they are organized for the purpose of studying in detail the technique of teaching different subjects or of conducting various types of classroom exercises. In this connection the following suggestive plan was described by Leonard Power in the *Elementary School Journal*, February, 1919.

> After choosing a subject for study the principal should reread at least three or four books on special methods in the subject to be studied. He should then plan his visits to include two visits to each teacher teaching the subject to be studied. To do this he needs a copy of each teacher's program at his desk. With the programs before him he should carefully schedule his visits, keeping in mind his office duties, possible conflicts, and the avoidance of visiting the same teacher after too short an interval.

This plan has many distinct advantages. The teaching problems which are observed and discussed in the classroom can be made the subjects of careful study and consideration by the teachers. Bibliog-

raphies can be prepared and distributed. The discussions in the teachers' meetings can center about these problems. Demonstration lessons can be given to illustrate effective methods of teaching. Committees can be appointed to make studies of appropriate supplies and materials for use in the classroom. Groups of teachers can assume responsibility for collecting descriptions of devices and methods which can be employed in improving the technique of teaching. In fact, the method of studying classroom technique in terms of a series of problems provides opportunity for emphasizing significant points with so much vigor and in so much detail that the teacher's point of view and technique of teaching can be radically modified.

When a supervisor undertakes the observation and criticism of classroom teaching he is confronted with a significant problem: By what standards or principles shall I judge the adequacy of the teacher s methods? Two sources of information are available and can be used to distinct advantage in this connection. The first is the summary of the principles derived through scientific experiments which underlie the effective and economical teaching of various elementary-school subjects. These principles are stated in clear, concise terms in the *Eighteenth Yearbook of the National Society for the Study of Education*, Part II. A supervisor can use these principles in judging the validity of various phases of the teacher's work. For illustration, the article on handwriting states what the best practices are concerning the position of the body, arm, hand, and paper, the slope of the writing, the best kinds of movements to employ, the effect of age and maturity on writing, and the most effective methods and devices to employ in teaching children to write. The twenty-eight principles which are included can be used most effectively in a thoroughgoing critical study of the technique of teaching handwriting. Similar sets of principles are found in the *Yearbook* for reading, spelling, and arithmetic.

The second body of information is the principles which underlie good practice in the general field of methodology. These principles appear for the most part in the general- and special-methods books on educational psychology and in recent articles. Several attempts have been made of late to summarize this extensive literature in terms of a series of principles or questions relating to the more significant types of teaching problems. In *School and Home Education*,

December, 1918, Herbert G. Lull summarized the most important points relating to pupil and teacher activities in several different types of classroom exercises. These outlines can be used to distinct advantage by supervisors in critical studies of teaching.

The reports which were submitted indicated that supervisors employ a variety of methods in making the hour spent in the classroom of value to teachers. Confidence is manifested in the teacher's plans and purposes; teachers are encouraged by favorable comments; strong and weak points in teaching are discussed and helpful suggestions are offered whenever necessary; written summaries of suggestions are checked; record blanks are filed with the teacher; pupils are questioned to determine the adequacy of the teaching; experiments are outlined and general changes in methods of teaching are recommended; devices are suggested for economizing time and effort; teachers are instructed in methods of analyzing the effectiveness of their own teaching.

The value of training teachers to analyze the results of their own teaching cannot be overestimated. Teachers frequently do good or poor teaching in certain subjects without knowing why the results are satisfactory or unsatisfactory. The supervisor can contribute largely to the teacher's equipment by training her to analyze critically and intelligently the results of her own efforts in a recitation. A device which is frequently employed in this connection has many interesting possibilities. After a drill recitation has been observed, a supervisor hands to the teacher a copy of an outline containing the important points which should be considered in a given type of recitation with the request that she review her own procedure and estimate her efficiency as accurately as she can on each point. An appointment for a conference is then made. During the conference the supervisor and the teacher compare notes. The strong points in the teacher's work are commented on and the contributing causes are considered. The weak points are discussed and remedial measures are suggested. Differences in the judgments of the supervisor and the teachers are frequently revealed. These differences form a definite point of departure for profitable and thoroughgoing discussions. It frequently happens that the teacher has standards which are too high or too low and which can be clarified through discussion. In many cases teachers do not have definite clear-cut ideas in regard to the characteristics of effective teaching.

These conferences provide an excellent opportunity for the discussion of valid standards.

Careful observations of recitations frequently suggest a variety of constructive measures which can be initiated by a supervisor. Detailed conferences with individual teachers have already been mentioned. The following devices were suggested by teachers in the reports: Group conferences are held to discuss problems which are common to several classrooms; bulletins of suggestions are sent to teachers concerning various phases of their work; suggestive articles, books, and bibliographies are sent to teachers; demonstration lessons are given to illustrate effective teaching technique; and schedules of visits are organized so that each teacher can observe the methods employed by other teachers in securing effective results.

One of the most effective devices for securing continuous growth on the part of teachers consists of a weekly report prepared by each teacher and sent to the supervisor on some important problem in methodology. As worked out by Professor E. A. Turner at the Illinois State Normal University, the weekly report blanks call for the following points:

1. The major problem in method attempted last week.
2. A description of the means employed in its solution.
3. A statement of the progress which was made.
4. A discussion of the obstacles which interfered with best results.
5. A statement of the major problem for solution next week.
6. A description of the means to be employed.
7. A discussion of the obstacles which will probably be encountered.

In order to aid the teacher in locating her major teaching problem a list of twenty or twenty-five questions similar to the following are included with the directions:

1. How can I improve my mastery of the subject-matter which is taught?
2. How can I improve the form and effectiveness of my questions?
3. How can I make the recitation move forward quickly and to the point?
4. How can I reduce my own activity in the recitation, at the same time increasing pupil activity?
5. How can I make drill lessons more effective?
6. How can I develop a studious attitude on the part of children?

The teacher is instructed to study the list and to review carefully her own teaching problems for the purpose of selecting a problem in method on which to center attention for a week. There are many advantages secured through the use of this plan: It directs the

teacher's attention to significant problems in teaching; it leads to a careful analysis of her strong and weak points; it concentrates constructive effort for a period of time on a single problem of methodology; it requires careful analysis and resourcefulness and usually leads to rapid growth; it secures for the supervisor a body of information concerning the needs of teachers which enables him to distribute his time and energy among them in harmony with their respective needs; and finally it leads to a continuous critical study of problems of methodology and technique so frequently not found in otherwise progressive school systems.

In order to secure a suggestive list of teaching problems about which supervisors could organize observations, conferences, and discussions to advantage, the teachers were asked to report the problems on which they needed help. The following representative list is an illuminating one. The individual items are listed approximately in the order of their frequency.

1. How to teach pupils to read silently and to study effectively.
2. How to conduct supervised study periods effectively.
3. How to secure an adequate amount of appropriate reference material.
4. How to teach problem-solving lessons effectively.
5. How to conduct a socialized recitation.
6. How to keep bright pupils busy and slow ones up to the standard.
7. How to secure better home work when there are no supervised study periods.
8. What are the most important outcomes of instruction in each subject?
9. Where to place the emphasis in each subject and how to progress with sufficient rapidity.
10. What appropriate standards of work are for each grade.
11. How to find out the most effective helps, references, maps, devices, materials, etc., for teaching each subject.
12. How to interest and control unruly pupils.
13. Special problems relating to particular subjects:
    a) How to teach such texts as *Tarr and McMurry's Geography* when pupils are unable to read them understandingly.
    b) How to make language work as interesting as arithmetic.
    c) How to make the work in geography interesting to all pupils.
    d) How to make knowledge of correct forms in English function in free expression.
    e) How much time should be spent in map study in the seventh grade?
    f) How to teach long division effectively.
    g) How to stress industrial and commercial geography in a vital way.
    h) How to secure correct movement and letter form in all written work.

THE NORMAL-SCHOOL CURRICULUM

H. A. BROWN
State Normal School, Oshkosh, Wisconsin

PRELIMINARY CONSIDERATIONS

In practically all phases of education, a process of evaluation, reorganization, and readjustment has been going on for the last few years. This has resulted in a rapid evolution of the public-school system. A part of this movement has consisted of an effort to apply the principles of a valid scientific management to teaching and to school organization and administration. There has been an especially pronounced and vigorous effort to secure better results in school by devising ways of accurately measuring present achievements, establishing more valid aims, formulating more economical types of procedure in teaching, and selecting better subject-matter for the content of the school curriculum. All of this is, of course, well known even to the superficial student of education. It is also a familiar fact that activity along these lines has brought about great changes in both elementary and secondary schools.

It is but natural, as a result of these conditions, that equally great, and probably greater, readjustments need to be made in the agencies for training teachers, particularly in the case of state normal schools. If they are to be adequate to the needs of the day, these institutions must expect to make extensive modifications of their past practices. In fact, there is evidence that state normal schools are now undergoing a marked change in fundamental particulars. A comparison of the courses of study of such schools throughout the country with courses in existence five years ago shows certain marked developments in the prevailing conception of the teacher-training process.

It is highly desirable, at the present time, that descriptions of present practices, where reorganization has been undertaken, should be made and accompanied by clear statements of the fundamental principles on which the reorganization rests.

This article consists of a description of the form of organization of the State Normal School at Oshkosh, Wisconsin, with reference to the planning of the curricula. The object is to present a report in the form of a description of the curriculum-plan under which the school is operating with some discussion and explanation of the principles on which it is based. The discussion has reference only to the training of teachers for the elementary school.

AIMS OF NORMAL-SCHOOL TRAINING

It is impossible to consider most profitably what the most desirable elements in curricula for the training of teachers are until we have made clear what we mean by a trained teacher. It is necessary, then, to ask: What are the characteristics of a trained teacher? There are at least four essential qualifications without which it is impossible to lay claim to being trained in any real sense of the term.

1. The teacher must be a person of sound scholarship within the range of his work. Most young elementary teachers, even though they are recent graduates of state normal schools, do not meet this requirement. They are usually persons of extremely superficial scholarship. Their knowledge of the larger relationships of such subjects as geography, history, and elementary science is in most cases extremely meager. The teacher needs to have a thorough knowledge not only of the subjects which he teaches but also of related subjects. A teacher of elementary science, for example, needs some acquaintance with geology, meteorology, mineralogy, botany, zoölogy, physics, chemistry, and astronomy for his own proper orientation and grasp of his subject, although he will not teach all that he knows. The teacher of reading should have a good working familiarity with the field of children's literature. The teacher of history in any of the lower grades must have a good insight into the history of our own country beyond that which he expects to teach, as well as considerable familiarity with the history of other nations. One of the chief sources of failure of young elementary-school teachers is their lack of scholarship. It is not uncommon to see young teachers who are supposed to have had excellent training, but who have such a weak grasp of the subject-matter and relationships of the subjects which they are supposed to teach that their instruction is weak and flabby. They lack just

the element of good scholarship to make good teachers. The public has a right to demand more in this respect than it is now getting. The time has come when the state normal schools must improve this situation if they are to continue to serve the public in an entirely satisfactory manner.

2. The teacher needs a knowledge of the facts concerning the mental processes of children and the laws of their growth and development. Such knowledge as the teacher would get in a somewhat elementary study, with the material judiciously chosen, of significant individual differences in children, the process of habit formation, the development of original behavior through growth and experience, the laws of fatigue, the psychological characteristics of children at various levels of development, the laws of efficient and economical learning and similar topics, furnishes him with information for understanding child nature and gives him a basis for professional ability, adaptability, growth, and self-direction in teaching—qualities which constitute the difference between the trained teacher and the teacher who is guided in his work by a few rule-of-thumb methods of which he has little or no real understanding. Such knowledge is capable of rendering valuable service to the teacher if it is so taught that it bears a functional relationship to actual work in the schoolroom.

3. The third essential of a trained teacher is an intimate knowledge of the best methods of teaching so far as they have been established up to the present time. Teaching is still in the experimental stage and a final and entirely valid pedagogy has not yet been established. On the other hand, there is a good deal of knowledge in the case of most subjects and very definite knowledge in a number, concerning methods of procedure in teaching which are known to be effective. Conclusions have been experimentally determined in the schoolroom. Recent work in the measurement of results of teaching and scientific evaluation of different kinds of procedure by experimental methods have brought to light facts concerning educational processes of various kinds and have enabled teachers to determine with considerable definiteness what procedure is most economical and most efficient. In the last three or four years it has been possible to formulate new methods in accordance with these scientific facts. Although improvements are sure to be made, there is now in use in many schools a technique of instruction in such subjects as reading,

spelling, handwriting, and arithmetic which can be classed as scientific. The schools now have a reasonably adequate scientific technique of drill. Teachers know how to secure adequate motivation in most subjects. A good deal of progress has been made in finding out effective ways in which to teach pupils how to study. The problem of effective teaching is being brought yearly nearer and nearer to a solution by formulating better and better methods as information emerges to throw light upon the nature of the learning process with which teaching is so closely connected that the two cannot be easily separated. The time has come when the trained teacher must have an intimate knowledge of these things.

4. The teacher needs to know a good deal about the best methods of school organization and management. This subject is coming to mean more than learning out of a book a few maxims about conducting schools. A modern course in school organization and management in a state normal school should certainly include a study of such topics as acceleration, retardation, elimination, and age-grade statistics; the hygiene of study; the educational value of play and athletics, and the conduct of the different forms of physical education; the factor of fatigue in the distribution of subjects; time apportionments; the use of standard tests; and many other similar topics. Elementary-school teachers, as trained at present, too often do not have a workable knowledge of these matters. The superintendent, or principal, who desires to put modern methods of supervision into operation in his schools too often finds that he has a teaching force which has an inadequate conception of the meaning of many things with which he wishes that they had become familiar in the normal school.

On the basis of these essentials it is possible to state with some definiteness certain main aims of normal-school training which should be embodied in curricula for preparation for teaching in the elementary school. There are three chief objectives which summarize what a state normal school should do for its graduates who expect to teach in the elementary grades. These are: (1) to broaden the scholarship of the prospective teacher within the field of his specific work; (2) to develop child-sense, professional ability, educational intelligence, and adaptability through the study of child psychology, principles of elementary education, educational sociology, school organization and management, and

similar studies; (3) to develop school-sense and specific ability to teach effectively through observation of excellent teaching in the training school and through actual teaching under the supervision of competent and experienced critic teachers and supervisors. Experience indicates clearly that all three of these factors are necessary if the highest efficiency is to be attained.

DIFFERENTIATED CURRICULA

The school is organized on the plan of differentiated curricula. Each of these curricula is designed to prepare for a *specific type of teaching service.* It is recognized as an impossible task to prepare students in a two-year course to teach competently all subjects in all grades of the elementary school. In most states it is difficult at the present time to extend beyond two years the course of instruction for teachers of the first six grades. For this reason, it is necessary in the interests of efficiency to adopt the principle of differentiated curricula. With these ideas in mind, the several curricula have been laid out with the purpose of giving teachers as broad an education as possible and as thorough specific training for a given line of teaching as the limitations of time will permit.

TYPICAL DIFFERENTIATED CURRICULA

The following curricula have been formulated to conform to the preceding statements concerning aims and principles. The curriculum designed especially to prepare for teaching in the first, second, and third grades is as follows:

I. Curriculum for Training Teachers for Primary Grades

FIRST YEAR

First Semester	Periods	Second Semester	Periods
Educational Psychology IA	3	Educational Psychology IB	3
English A	5	Children's Literature	3
Arithmetic	3	Drawing	5
Music	5	Primary Handwork	4
Geography	3	History	5
Library Methods	1	Apprentice Teaching	1
Nature Study	4	Observation of Teaching	2
Apprentice Work	1	Elementary Education IA	2
	25		25

SECOND YEAR

First Semester	Periods	Second Semester	Periods
Elementary Education IB	5	Elementary Education IC	3
Educational Sociology	3	School Organization and Management	2
Educational Tests and Measurements	2	Supervised Teaching	20
Plays and Games	3		
Appreciation of Music	2		
Sanitation and Hygiene	2		
School Law	1		
Children's Literature	3		
Observation of Teaching	2		
Apprentice Teaching	2		
	25		25

The curriculum designed especially to prepare for teaching in the fourth, fifth, and sixth grades is as follows:

II. Curriculum for Training Teachers for Intermediate Grades

FIRST YEAR

First Semester	Periods	Second Semester	Periods
Educational Psychology IA	3	Educational Psychology IB	3
English A	5	Arithmetic	4
Drawing	5	Music	5
Civics	2	Nature Study	3
Children's Literature	3	Geography	5
History	5	Apprentice Teaching	1
Library Methods	1	Observation of Teaching	2
Apprentice Work	1	Elementary Education 1A	2
	25		25

SECOND YEAR

First Semester	Periods	Second Semester	Periods
Elementary Education IB	5	Elementary Education IC	3
Educational Sociology	3	School Organization and Management	2
Educational Tests and Measurements	3	Supervised Teaching	20
Appreciation of Music	2		
Plays and Games	2		
Children's Literature	3		
School Law	1		
Sanitation and Hygiene	2		
Observation of Teaching	2		
Apprentice Teaching	2		
	25		25

The curriculum designed especially to prepare for teaching in the seventh and eighth grades is as follows:

III. Curriculum for Training Teachers for Upper Grammar Grades

FIRST YEAR

First Semester	Periods	Second Semester	Periods
Educational Psychology II A	3	Educational Psychology IIB	3
English A	5	Children's Literature	3
Music	5	Drawing	4
Arithmetic	5	Elementary Science	3
Geography	5	Mathematics for Junior High Schools	2
Library Methods	1	History	5
Apprentice Work	1	Apprentice Teaching	1
		Observation of Teaching	2
		Elementary Education IIA	2
	25		25

SECOND YEAR

First Semester	Periods	Second Semester	Periods
Elementary Education IIB	5	Elementary Education IIC	3
Educational Sociology	3	School Organization and Management	2
Educational Tests and Measurements	3	Supervised Teaching	20
Civics	3		
Physiology and Hygiene	3		
Children's Literature	3		
School Law	1		
Observation of Teaching	2		
Apprentice Teaching	2		
	25		25

The curriculum designed especially to prepare principals for Wisconsin State Graded Schools is as follows:

IV. Curriculum for Training Principals for Rural Elementary Schools with Especial Reference to Wisconsin State Graded Schools

FIRST YEAR

First Semester	Periods	Second Semester	Periods
Educational Psychology IIA	3	Educational Psychology IIB	3
English A	5	Children's Literature	3
Arithmetic	5	Junior High School Mathematics	2
Elementary Agriculture	5	Elementary Agriculture	4
Geography	5	History	5
Library Methods	1	Elementary Science	3
Apprentice Work	1	Apprentice Teaching	1
		Observation of Teaching	2
		Elementary Education IIA	2
	25		25

SECOND YEAR

First Semester	Periods	Second Semester	Periods
Elementary Education IIB	5	Elementary Education IIC	3
Educational Tests and Measurements	3	School Organization and Management	2
School Law	1	Supervised Teaching	20
Physiology and Hygiene	3		
Civics	3		
Manual Arts	6		
Observation of Teaching	2		
Apprentice Teaching	2		
	25		25

In addition to these curricula there is a special three-year curriculum for training teachers and principals for junior high schools and also a two-year curriculum for training teachers for rural schools. A four-year course for training high-school teachers is under consideration and will probably be adopted in the near future.

NATURE OF SUBJECT-MATTER COURSES

It will be noted that in the first year of each curriculum the work is largely concerned with courses in music, drawing, arithmetic, geography, history, and similar subjects. It is intended that this work shall be very largely subject-matter. It is believed that a somewhat new kind of course is needed in these first-year academic courses. This work is not simply a review of previous elementary-school work, nor is it the old-time, so-called professional review, which attempted to illustrate methods of teaching by reviewing the subject-matter appropriate to children in the various grades. Neither is this work purely academic in the sense that the term is used in connection with academic courses in a college of liberal arts. It is not knowledge for its own sake. These courses are none of these things, but they consist of a type of subject-matter which is advanced work, strictly of college grade, the purpose of which is to lay a broad foundation of scholarship and appreciation for prospective teachers, giving a larger insight and a broader conception of subject-matter than the students have previously had. The breadth and richness of scholarship and appreciation which the students get help in a large measure to remedy one of the great weaknesses on the part of young teachers—their lack of scholarship. No attempt is made in these courses to teach methods, except in the most incidental way.

DIFFERENTIATED SUBJECT-MATTER

In the various curricula there is a differentiation in the type of subject-matter which is taught. For example, to the students who are under training for primary teachers, a type of history is offered which pertains particularly to the first three grades. In the intermediate curriculum, which deals with the fourth, fifth, and sixth grades, an entirely different type of history is taught. The history in the grammar-grade curriculum is unlike that in either the primary or intermediate curricula. In the training of teachers for rural schools, the work in history is especially adapted to the needs of the country schools and is, therefore, different from that in any of the other curricula. What has been said about history is true of practically all subjects, including psychology, elementary education, and school organization and management.

FUNDAMENTALS OF GOOD ENGLISH

A course in the fundamentals of good English, called English A, is given in the first semester of the first year, and is required of all students in school. It treats the fundamentals of English which should form a permanent part of the equipment of a teacher and deals primarily with the problem of correct oral and written speech. The fundamentals of good English are taught intensively and all students on completing the course are required to meet a definite standard of proficiency. Further work is required of any who fail to attain—and maintain thereafter—a satisfactory standard of written and spoken English. Students who show a satisfactory standard of proficiency at any point in the course are immediately excused from the class on condition that this standard shall be maintained in all that they do in school. Students who fail to reach this standard at the end of the course are required to take further work without credit and students who at any later time show deficiencies in written and spoken English are obliged to go back into this class.

Two forthcoming articles deal with professional courses and practice-teaching in the state normal school.

THE PRINCIPAL AND TEACHERS' METHODS OF RANKING PUPILS

LEONARD POWER
Principal, Austin School, Dallas, Texas

The rating of pupils is a problem of great importance in the elementary school. The chief and often the only record sent to the home by the school is a card on which is stated the mark made by the pupil in each subject taught. The rank is indicated either in numbers or in letters which are abbreviations of words. There is not even room on the card for the word "Good," and the letter *G* is used. That little letter expresses all that the child has done in that subject since the last report. It is so small and leaves so much unsaid that it must be supported by other records carefully and frequently taken. That letter should be a true summary. Only two or three such letters may determine the loss of a half-year in the life of a child. It is to be regretted that the element of flexibility is so small that we do not universally promote by subjects. There is then more reason for giving the mark on the card a support that will make it quite certain that it is not far wrong.

It has been my experience that many teachers record the grades at the close of the month without having before them any written record of work done during the month. One teacher graded thirty-five children in this manner in less than thirty minutes—less than a minute's consideration to the work of a month. Such a teacher fails to realize her responsibility or is criminally negligent. The principal needs to give to her the correct viewpoint of grading and something of its vital importance. She may pass all the children if her mood is cheerful, or she may fail over half of the children if she gets out her grade cards on the last day of the month, at the close of a rainy day, after her nerves have been tried to their breaking point. She may, on any day that her grading is done, adopt the poor lesson of that day or of the day before as a basis for her grade. She is so likely to make mistakes in her grading that she should never record a grade on a card without a complete and careful consideration of a written record.

The teacher described above may be a good teacher in many ways. She may be too valuable to the system to lose. She may be following a habit fixed under less careful supervision. The principal may wish to keep her. With some teachers a conference is sufficient to lead them to keep written records from which to make a summary on the grade card. At an open meeting of the teachers the principal may assign "Grading" as a topic for discussion. If the principal arbitrarily makes a rule, he may get a written record made weekly or twice a week, but made in the same manner that the monthly record had previously been made. While these records are probably of greater value than no records at all, their value, compared with the conception of grading which should be in every teacher's mind, is very small.

It seems to me that an arbitrary rule about the frequency of written records or grades often arouses such a spirit of antagonism on the part of any teacher that the rule does more harm than good. The spirit of antagonism may carry over into the attitude of the teacher on every other matter concerning the principal. A school system may have accepted mistaken ideas and false standards of grading so long that a year or two will be required to change them. Evolutionary methods are to be preferred to revolutionary methods. The change must be in the teacher's mind if it is to be effective. If it can be brought about there, it will outlive the administration of the particular principal and will grow and develop in time. If it is not there, a formal rule is a mockery.

Very few teachers are criminally negligent, and my assumption has therefore been in all cases that all that teachers need is training. My problem has been with the teacher who failed to realize her responsibility and who was ignorant of how rightly to discharge it when shown. I find that the careless grader is usually the one who fails to keep abreast of the current thought in education. On her desk I find magazines that contain lesson plans beautifully arranged and carefully thought out by someone. I also find a scrapbook with plans taken from other magazines. I find in her cabinet a collection of pictures. All of the above speak eloquently of the past. She was a splendid teacher during the first year or two she taught—four, six, eight, ten, or more years ago. The magazines are all of them a few years old and some are voices of another generation. The pictures are yellow and worn from their many

years of service. I have tried not to overdraw the picture. It teaches me that my task is one of resurrection, and I know that once those ideals which led that teacher into the classroom are revived, I can use what was learned from those magazines as a foundation for what I wish to build.

Frequent recording of marks under a rule adopted by the principal will not, as I pointed out above, solve the problem of a scientific record of the accomplishments of children. A teacher may keep a daily record and may take an average record to send home at the close of the month and yet be mistaken in her estimate of the child's progress. Her standard may vary from day to day, and probably will, if it be a subjective standard. If, as soon as Johnnie recites, a mark is made, it may not be relative to any previous recitation of Johnnie's but may be relative to the boy who just preceded him. The teacher herself may have no correct standard of what a boy in that grade should accomplish in a given subject. She may have no standard at all, or her standard may be far too high or too low. The teacher has no way of knowing whether her standard is right or wrong except as she is told by the results of city-wide tests in cities or of standard tests which have been used enough to give scientific results. Our first duty, therefore, is to establish standards. This calls for tests.

In most cities tests are not given in the grades below the fourth, and in some subjects no tests are given in any grade. Principals in these cities will meet the same problems in the grades and subjects not affected by the city-wide tests that the principals in smaller towns meet where no tests at all are given. Even where there are city-wide tests, they may fail to help the teacher in her grading. The application of many of the present standards given to us from the laboratories of the universities is so complicated that an expert is required to give the tests, and they therefore fail to meet the needs of the classroom teacher. As an introductory step to the use of the most generally accepted standards, the principal should develop with the help of his teachers some standards in his own school. This process will introduce teachers to the technique of using all the tests which they will ultimately need to employ.

The approach of the principal should be cautious, deliberate, and scientific. The first step may be worked out in general meetings with the teachers. It should be the principal's chief purpose

at first to give all the teachers a clear understanding of what is meant by a standard. He should begin by showing them through studies of their own marks that they have no common standards and that each one varies in her individual standards. To accomplish this the principal should make a careful study of the grading of his teachers. It is my practice to inspect each report card. When I see a card on which a grade below passing is recorded in any of the major subjects, I make an entry in a special book. The book is arranged as indicated in Table I. Only a record of the grades below passing are entered. The total number of pupils graded each month and the total number of *U*'s (unsatisfactory) in each subject and in each grade are thus readily seen. From this record it is also easy to determine the percentage of grades above *U* in any grade or in any subject. A graph of the percentage of grades at passing or above is then made. This graph is made by subjects in those subjects that are common to all grades in the school—

TABLE I—LOW SEVENTH

Pupil's Name	Period	Reading	English	Arithmetic	Geography	History	Physiology	Spelling	Total
John Jones...	1st month.	.....	U	.....	.....	.....	.....	.....	1
	2d month .	.....	U	U	.....	.....	.....	.....	2
	3d month .	.....	.....	.....	.....	.....	.....	.....	0
	4th month.	.....	.....	U	.....	.....	.....	.....	1

reading, English, and arithmetic. This graph is framed and kept in the office. At the close of each term the attention of the teachers is called to it. In order to differentiate the work of the different terms, different kinds of lines are used. A solid line is used for the first term's work and a broken line for the second term's work. In order to differentiate the different years different colors of ink are used.[1]

With such a graph the principal can show the need for a standard by the variation in the distribution of grades given by different teachers and given by the same teacher in different months. Some conception of the work of the school as a whole is also exhibited. A composite graph of all three subjects is made by using three colors of lines and a solid and a broken line for each color, each color representing a graph of grades given in a certain subject. This

[1] For purposes of this article, however, the terms and subjects have been differentiated as indicated at bottom of Fig. 1.

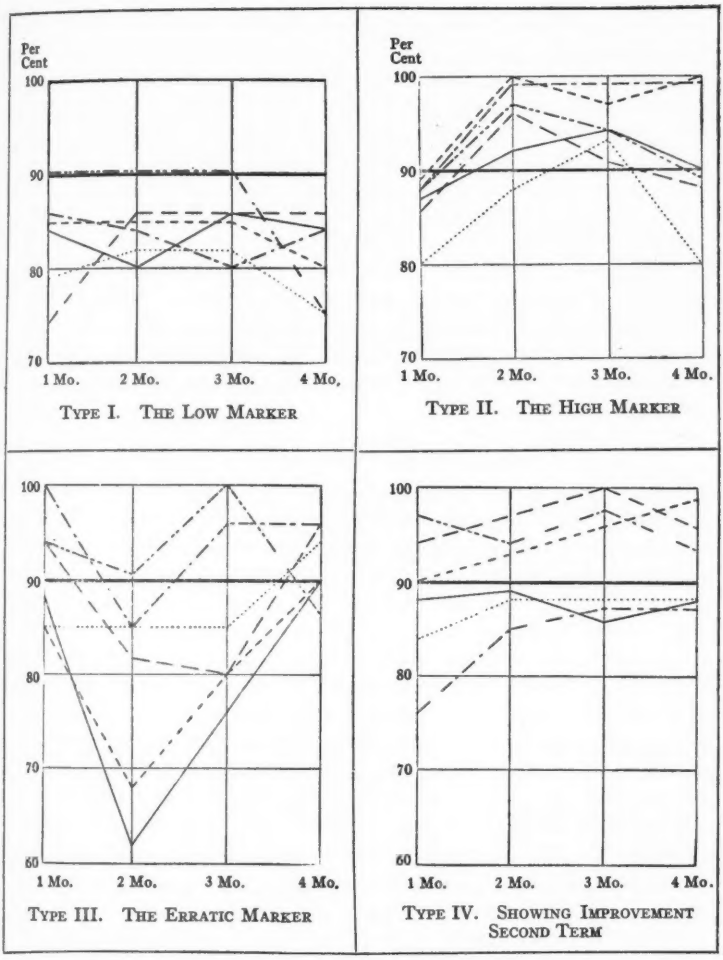

Per Cent
100
90
80
70
1 Mo.
2 Mo.
3 Mo.
4 Mo.
Type I. The Low Marker
Per Cent
100
90
80
70
1 Mo.
2 Mo.
3 Mo.
4 Mo.
Type II. The High Marker
100
90
80
70
60
1 Mo.
2 Mo.
3 Mo.
4 Mo.
Type III. The Erratic Marker
100
90
80
70
60
1 Mo.
2 Mo.
3 Mo.
4 Mo.
Type IV. Showing Improvement Second Term
Reading first term.....
Reading second term — — — —
English first term———————
English second term — — — — —
Arithmetic first term — . — . —
Arithmetic second term— - - — . .

Fig. 1

composite graph shows clearly the teachers who are "strict" graders in all subjects and shows the subjects in which "strict" grading is done.

Some examples of the graphs of marks by individual teachers are exhibited in Fig. 1. Each point in the graph represents the percentage of pupils in that grade and subject who were marked as satisfactory or passing. Where the points are high in the graph, they mean that a large percentage of pupils passed; where the points are low, the failures are numerous. The ideal graphs should not vary much either above or below 90 per cent in distribution of passing grades. If more than 90 per cent pass, the work is probably too easy; if less, the work is probably too difficult. In any case, the faculty should be brought by such graphs and such statements to understand the real meaning of the passing mark. That a faculty can be brought in time to take into account the distribution of grades is a proven fact. With this method I have seen the grade distribution move term by term toward the ideal 90 per cent.

I have known cases at the outset of such a study where one low-third-grade teacher was passing only 65 per cent of her children in reading while another low-third-grade teacher was passing 85 per cent of her children in reading. Here were two classes doing the same work but with a variation of 20 per cent in distribution of passing marks. The problem for the principal was to get the teacher who was passing only 65 per cent of her children to pass more—if possible, 90 per cent. Visits to the two rooms by the principal convinced him that the children in the 65 per cent room read more fluently than those in the 85 per cent room. This condition was called to the attention of the primary supervisor and she thought so too. The problem then was to get the first teacher to see that fact. Mere conference was insufficient. She was a teacher who had been teaching in that grade, or grades just above or below it, for many years. She felt that she knew how a low-third child should read, and she was sure that the class in question was the poorest class she had ever had.

Here then was just the place to introduce a standard reading test. The time to introduce standards or anything else is when the need is felt. The Kansas Silent Reading Test was chosen because it is easy to give and easy to score. The test was given in the high-third grades as well as in the low third. The results of

the test proved the principal and supervisor were more nearly right in their estimate of the class than was the teacher. The 65 per cent class scored higher than the 85 per cent class and as high as one of the high-third grades. The 65 per cent class made a median score higher than the median score of the tests given to corresponding grades in 1915 and 1916. The influence of the standard on the teacher was clearly seen in her later grading. Furthermore, the use of this one test aroused the interest of all of the teachers concerned to such an extent that they read a book on measurements.

THE GENESEO SCALE OF QUALITIES

JOHN C. REEDER
Superintendent of Schools, Dixon, Illinois

Studies of grading have revealed a woeful lack of uniformity within school systems and among systems. Many teachers have been slow to accept any suggestions on grading and have frequently taken the position that outside influences in the way of scales and grading schemes are attempts to bias their judgment. There is a growing realization, however, that judgments can be trained, and that there is nothing mysterious or sacred about personal judgments that would make their standardization sacrilegious. That judgments of the worth of work done need standardization has been pointed out by the studies of Starch and Elliott,[1] Johnson,[2] Kelly,[3] and others.

When the writer took charge of the elementary schools at Geneseo, Illinois, he instituted the following five-step grading scale: P, below 60; U, 60–74; F, 75–84; G, 85–94; E, 95–100. When the grades were handed in at the end of the second period of six weeks, it became evident that teachers were not thinking of the same qualities of work when they recorded a given grade. For example, an F grade from one teacher meant the same in accomplishments as a G grade from another, etc.

Two plans were known that suggested a solution of the problem: (1) the Kansas City High School scheme of posting in the classroom a detailed statement of the work required for each grade given; and (2) the analysis of the qualities of work necessary for each of the seven groups of grades given in the University of Rochester.[4]

In attempting to improve the method of grading employed in Geneseo, it was decided to make use of the suggestions offered by the Kansas City and Rochester plans. In this connection the

[1] DANIEL STARCH and EDWARD C. ELLIOTT, "Reliability of the Grading of High-School Work in English," *School Review*, XX (September, 1912), 442–57; "Reliability of Grading Work in Mathematics," *School Review*, XXI (April, 1913), 254–59.

[2] FRANKLIN W. JOHNSON, "A Study of High-School Grades," *School Review*, XIX (January, 1911), 13–24.

[3] F. J. KELLY, "Teachers' Marks," *Teachers College Contributions to Education*, No. 66 (1914), p. 7.

[4] Annual Catalogue, University of Rochester, 1916–17.

following questions arose: Would it be possible for teachers to put in writing this mysterious and intangible ability to judge school work? If so, would it be possible to compile a scale of qualities of school work by combining and summarizing these written statements?

As an initial step in this investigation each teacher was required to put in writing, without consulting other teachers, her statement of the appropriate qualities of work for each of the five steps on the grading scale. This proved very difficult for most teachers and apparently impossible for some, and yet these teachers who could not reduce their systems of grading to writing were grading pupils daily and determining promotions and non-promotions each year. Many excellent schemes were handed in, however. The second step in the study of this problem was to digest the statements which were submitted and form a scale.

To solve this problem a committee of three teachers was selected. The committee found its task difficult because of the extreme variations in the form of expressions and language used in the individual teacher's reports. The difficulty was further increased by the requirement that terms be used that parents, pupils, and teachers could understand. After a large amount of co-operative work on the part of the committee and the teachers, the scale on the following page was organized. It is unnecessary to state that the committee found it necessary to reword and regroup many times the initial statements which were submitted before the final report was ready.

When the scale had been printed and distributed among the teachers it was found distinctly helpful in the following ways: (1) Teachers get in mind the adopted qualities for each step in the grading scale before marking a set of papers or making up the averages for six weeks. (2) Pupils collected about these posted scales soon after they received a paper or a scholarship report in order to determine the reason for unsatisfactory marks. They saw clearly just what the teacher had in mind when the grades were given and, better still, they frequently discovered just what had to be done to get a step higher on the scale. (3) Parents frequently wanted to know "how you teachers grade anyway." In reply, copies of the scale were frequently given to them. The scale answered many of the questions which the parents asked from time to time.

SCALE OF QUALITIES OF WORK

PUBLIC SCHOOLS, GENESEO, ILLINOIS

P Work	U Work	F Work	G Work	E Work
1. Little effort to respond. 2. Only one-half the assigned work attempted. 3. Failure to hand in written work on time. 4. Guessing at answers to questions. 5. Written work shows little ability. 6. No effort to make up work lost during absences.	I. Knowledge of subject-matter. 1. Very irregular answers. Thoughtful answers infrequent. 2. Topical recitation. *a*) Topical recitation seldom made. *b*) Detailed questions necessary. 3. Written work. *a*) Work contains one-half of the important facts. *b*) No effort made to secure proper form, wording, thought, writing, spelling, punctuation, and neatness. II. Preparation. 1. Not constant in daily preparation. 2. Preparation covers only about three-fourths of the assignment. III. Attitude. 1. In recitation. *a*) Needs reminding of correct position. *b*) Inattentive. 2. Toward preparation. *a*) Requires much assistance. *b*) Lack of imagination or creative ability. 3. No regard for team work.	I. Knowledge of subject-matter. 1. Irregular answers, not well directed in thought. 2. Topical recitation. *a*) One-half of the recitation topical. *b*) Question from teacher necessary to complete the recitation. *c*) Some volunteering. 3. Written work. *a*) Work should contain three-fourths of the important facts. *b*) Less care shown in form, wording, thought, writing, spelling, punctuation, and neatness than in G work. II. Preparation. 1. Daily preparation. 2. Insufficient time spent in preparation. III. Attitude. 1. In recitation. *a*) Attention poor. *b*) Needs reminding about correct position. 2. Toward preparation. *a*) Requires frequent assistance. *b*) No imagination or creative ability shown. 3. Not enough regard for team work.	I. Knowledge of subject-matter. 1. Answers to questions (oral and written) well directed in thought. 2. Topical recitation. *a*) Pupil completes the assigned topic. *b*) Frequent volunteering expected. 3. Written work. *a*) Statements brief and clear. *b*) Careful in form, wording, thought, writing, spelling, punctuation, and neatness. II. Preparation. 1. Preparation daily. 2. Preparation done thoughtfully. 3. Written work in on time. 4. Directions of the assignment followed as an outline. III. Attitude. 1. In recitation. *a*) Good position—standing and sitting. *b*) Attentive. 2. Toward preparation. *a*) Ability to work without much assistance. *b*) Judgment in using time to advantage. 3. Good team work.	I. Knowledge of subject-matter. 1. Memory and thought questions answered intelligently. *a*) No guessing. *b*) No help from the teacher in recitation. 2. Topical recitation. *a*) Assigned work given clearly and thoroughly. *b*) Outside information and volunteering expected. 3. Written work. *a*) Statements brief but clear. *b*) Careful in wording, form, thought, writing, spelling, punctuation, and neatness. II. Preparation. 1. Daily preparation. 2. Preparation done rapidly and thoughtfully. 3. Written work in on time. 4. Direction of the assignment followed as an outline. III. Attitude. 1. In the recitation. *a*) Good position—stand ing and sitting. *b*) Attentive. *c*) Enthusiastic. 2. Toward preparation of lessons. *a*) Ability to work alone. *b*) Good judgment in the use of time. 3. Towards good team work. *a*) Shows respect for the rights of others. *b*) Co-operates with the teacher.

NOTE.—In all written work deductions shall be made for misspelled words. In case the deductions reduce the grade below 75 per cent, the minimum of an F grade, the pupil may be requested, or he may be permitted, to rewrite the paper, book or dictionary in hand, spelling all words correctly. The grade on the rewritten paper shall be as much above 75 per cent as one-half the distance between 75 and the original grade, disregarding spelling; e.g., a paper is worth 90 per cent; but deductions for spelling take the grade down to 70 per cent; the rewritten paper then would be marked 82 ½ per cent or F. The grading scale used is E, 95–100; G, 85–94; F, 75–84; U, 60–74; P, below 60.

The primary purpose of the scale, of course, is, first, to bring about a high correlation between teachers' marks and the quality of work done by the children, and secondly, to enable teachers to agree on qualities of work necessary for each step on the grading scale. How well this is done is shown from Table I which consists of a tabulation of 4,800 semester grades given by twelve teachers during four semesters, the first 100 grades being selected from each teacher's semester report. It will be noted from Table I and Table II

TABLE I

NUMBER OF TEACHERS' GRADES ASSIGNED TO THE VARIOUS STEPS ON THE GRADING SCALE

Teacher	P	U	F	G	E
G.O.	7	34	133	186	40
D.B.	9	39	146	170	36
M.C.	3	25	142	199	31
S.T.	2	27	162	176	33
K.D.	.....	4	77	295	24
J.W.	8	9	89	259	35
J.B.	.....	16	175	178	31
L.B.	2	17	139	200	42
B.B.	2	10	85	253	50
S.M.	3	20	63	250	64
A.S.	3	9	114	214	60
J.V.	4	58	157	149	32
	43	268	1,482	2,529	478

Reading of Table I: Teacher G.O. gave 7 grades P, 34 U, 133 F, etc.

that there is a positive correlation between the percentage of grades assigned to each step on the scale by the individual teacher and the percentage assigned by the group of teachers. With the exception of K.D. and J.V. the correlation is marked.

The curve of distribution is skewed to the right. It will be observed that the scale itself may account for this. The steps U and P are not well defined. U should be a conditional grade, the upper half of the step passing, and the lower half failing. It is now all interpreted a failure, although not so complete as P. This really leaves three passing grades and partially accounts for the placing of too many grades in the G step. If the qualities can be

restated so as to form a normal curve, the teacher's grades can be made to follow that curve.

TABLE II

PERCENTAGE OF TEACHERS' GRADES ASSIGNED TO THE VARIOUS STEPS ON THE GRADING SCALE

Teacher	P	U	F	G	E
G.O.....	1.75	8.50	33.25	46.50	10.00
D.B	2.25	9.75	36.50	42.50	9.00
M.C.....	0.75	6.25	35.50	49.75	7.75
S.T.....	0.50	6.75	40.50	44.00	8.25
K.D.....	.....	1.00	19.25	73.75	6.00
J.W.....	2.00	2.25	22.25	64.75	8.75
J.B.....	.....	4.00	43.75	44.50	7.75
L.B.....	0.50	4.25	34.75	50.00	10.50
B.B.....	0.50	2.50	21.25	63.25	12.50
S.M.....	0.75	5.00	15.75	62.50	16.00
A.S.....	0.75	2.25	28.50	53.50	15.00
J.V.....	1.00	14.50	39.25	37.25	8.00
	0.80	5.60	30.90	52.70	9.90

Reading of Table II: Teacher G.O. gave 1.75 per cent grades P, 8.5 per cent U, 33.25 per cent F, etc.

The scale is crude and needs many restatements. The moral significance of E (Excellent), G (Good), F (Fair), U (Unsatisfactory), and P (Poor) is not good. A, B, C, D, and E would probably be better. The note on the scale is an attempt to secure care in spelling in the written work of all departments.

SIXTH-GRADE SCIENCE PROJECTS

BERTHA M. PARKER
School of Education, University of Chicago

In the University Elementary School the time given to science in the 6A grade is largely spent in the study of electricity and magnetism. This subject-matter lends itself well to the carrying out of simple projects. The projects described here are some of those carried out by the sixth-grade classes in the past two years.

I. MAKING SETS OF TELEGRAPH INSTRUMENTS

This project is part of a unit on the sending of messages by electricity. The value of this project as a science project lies largely in the method of presentation. A class may make sets of telegraph instruments in such a way that its members receive practically no training in scientific thinking. To illustrate: There are several books written for children giving very detailed directions for the construction of simple electrical apparatus such as telegraph sets. These books are valuable as reference books for the teacher. They suggest materials which are easy to obtain and which can be used satisfactorily in such construction work. They also help the teacher decide what pieces of electrical apparatus are simple enough for the children to undertake to make. If, however, children are referred to these books as guides in making their instruments, a large part of the value of the project is lost. The making of a telegraph set from such directions is simply a handwork exercise. A child can follow directions and make a telegraph set without understanding how the instruments work. If the instruments, when finished, fail to work properly, he does not know what adjustments he can make. The construction of a set of instruments by copying a model made by the teacher is, of course, open to the same objection. On the other hand, if a child is required to make his own plans for a set of telegraph instruments, he must think for himself. He must first find out how telegraph instruments work. If, when he has finished them, they fail to work, he has a basis for locating the difficulty. Since the construction

of apparatus in science classes is designed to motivate the study of the scientific principles underlying the working of the piece of apparatus, as well as to give the child training in constructive thinking, each child should make his own plans for the instruments he builds.

The class last spring worked out the project of making sets of telegraph instruments in the following way: The class examined a standard telegraph set to find out what instruments they would have to make. As they examined the instruments, the key and sounder were named for them. In the two sets in the laboratory the sounder and key are on the same base. The children then looked at pictures of telegraph sets in catalogs of electrical apparatus and found that often the key and sounder are on separate bases. To find out how the key and sounder work, the children connected them with a dry cell, pressed down the key, and noted the sound which was made. The class had previously worked out the problem of wiring a house for a door-bell and the children saw quickly that the key in the telegraph set serves the same purpose as the push-button in the door-bell circuit. They saw that it is merely a device for making and breaking the circuit. They next examined the sounder to find out how the sound is made. They had previously made small electromagnets to be used in connection with toy construction sets and they recognized the electromagnet in the sounder. They traced the path of the current through the sounder and worked out what they considered a reasonable explanation of the way in which a sounder works. They then checked their explanation by reading.

The question now raised was, How can a message be sent with these instruments? Most of the children in the class knew that messages are sent in dots and dashes. The Morse and Continental Codes were copied on the board. In answer to the question concerning the way in which the operator can make a distinction between a dot and a dash when he sends a message, the class immediately suggested that he could hold the key down for a longer time for a dash than for a dot. Each child in the class selected a short word. He showed the class how he would send that word and the class was asked to tell, by listening, what word he had sent. The children soon discovered that when a dot is sent there is a very short time between the click made by the armature as it comes

down and that made when the armature is pulled up against the stop, and that this time is longer when a dash is sent. They discussed the advantages of the Continental Code over the Morse Code.

The class then raised two questions: Why is there a switch near the key? How can messages be sent a long distance with the telegraph? One member of the class was told to show the class what would happen if the switch were closed. He found that moving the switch over serves exactly the same purpose as pressing down the key. Why, then, have both a switch and a key? The children could find no answer to this question except that the switch might be used in case of emergency if the key broke. This judgment was left open to question. The method of sending messages a long distance was then discussed. One child suggested that the key might be in one city and the sounder in another. The class pointed out that each city would want both to send and receive messages. There must be, they decided, both a key and a sounder at each station. Each child then drew a diagram showing how he thought two sets of instruments could be connected so that messages could be sent and received at each station. Several of these diagrams were put on the board and were discussed by the class. The class selected the plan that seemed to them the best. They next tested the validity of this judgment. Two sets of instruments on opposite sides of the room were connected according to that plan. The key at one station was then pressed down but no sound was made at either station. The children traced the path of the current and found that there were two breaks in the circuit—one at each key. They suggested, as a remedy, that the operator who was receiving hold down his key. This was tried and it was found that a message could be sent. This plan was voted a poor one, however, because it would be tiresome for the receiving operator and he would have no way of knowing when to hold the key down in order to receive a message. It then occurred to them that the switch serves the same purpose as the key and that it could be closed instead of holding down the key. This was tried and worked well. The children then practiced sending messages from one side of the room to the other and from the corridor to the room.

Each child drew a diagram in his notebook showing how the two sets of instruments were connected so that he could refer to it when he wished to connect his own instruments with another set.

The materials which could be used for a key were then discussed. The children were told to plan to use only materials which could be readily obtained from the woodshop or from a hardware store. The class suggested cutting the key and switch from sheet metal. The supply of sheet metal on hand was shown to the class. This supply included copper, tin, sheet iron, brass, and zinc. This brought about a discussion as to which of these metals is the best conductor of electricity. Tables were consulted to settle this question. Copper and brass were chosen as a result of this investigation. Small stove bolts with nuts, brass screw-eyes, and brass-headed tacks were suggested as possibilities for binding posts. The class thought that the small stove bolts would be the most satisfactory.

Since the class had previously made electromagnets, the children were familiar with the materials necessary for the electromagnet of the telegraph sounder. However, those who wished to use a U-shaped magnet had to work out a way of connecting two electromagnets, such as the ones they had previously made, to make a U-shaped magnet. Nails, short pieces of iron rod, and strips of wood, with strips of sheet iron attached, were suggested as possibilities for the armature. Each child decided which kind would serve his purpose best. Rubber bands were thought the best substitute for a spring. Each child was then asked to tell the class any points he had thought of that might be helpful to the others in planning their sounders. Their attention was called to such facts as that the armature must be very close to the poles of the magnet and that the armature must not touch the magnet when it is pulled down.

Each child then made his plan for the key and the sounder. When the plans were finished, they were drawn on the board and the class was asked to criticize each one. Mistakes pointed out by the class were corrected. This checking of plans by the class served to prevent useless waste of materials. Mistakes not pointed out by the class were left for the child to discover for himself when he made and tested his instruments. Although the materials used in the various instruments were practically the same, the plans showed considerable variety. Some planned to use a single magnet, some to use a U-shaped one. In some cases the armature was to be placed below the magnet so that no spring was necessary to pull

the armature away from the magnet. Some placed the key and sounder on one base while others preferred a separate base for each. The method of supporting the armature varied greatly.

The actual construction work was done in the woodworking shop. Each child tested his instruments when he had finished them and made any changes that were necessary. The instruments were then painted. Although some of the sets were much better than others, everyone in the class succeeded in making a set that worked. Each one connected his instruments with those of some other person in the class according to the diagram which he had put in his notebook.

This diagram was then compared with a diagram in a reference book which showed two telegraph sets connected with a grounded circuit. The methods of grounding the wires were discussed. The class proved, by connecting one end of the wire to the gas-pipe and the other end to the water-pipe, that a grounded circuit works satisfactorily. The children suggested that it might be better, in case they connected their instruments with other sets, to use a grounded instead of a metallic circuit. They were given a reference to read which compared the two methods and helped them decide under what conditions each is preferable.

In connection with using their instruments at home, the question arose as to whether both switches should be left closed when the instruments were not in use. A discussion brought out the fact that it depends on the source of electric current. Dry cells would wear out very rapidly if both switches were left closed. From reading, the class found that in commercial stations gravity cells, storage batteries, or small dynamos are used instead of dry cells. They discussed the possibility of using these sources of current at home and found the gravity cell a possibility. They also reached the conclusion that for their purposes dry cells could be used but that only one switch should be left closed.

One member of the class planned to take his set with him on his summer vacation, and asked if, in case he wished to connect his instruments with another set some distance away, he would have to add many more cells. As an answer to this question, a relay was examined and operated, and an explanation of its purposes was worked out by the class. The advantage of using a relay over increasing the number of cells on a line was brought out

from reading. The children noted the similarity between the relay and the sounder. The making of a relay and of a second telegraph set was suggested as a home project.

The class then read a story of the invention of the telegraph. They compared their instruments with the one which Morse first made. They discussed the ways in which the telegraph is an improvement over the methods of sending messages before the telegraph was invented. They looked up statistics to find out how important the telegraph is today as a means of communication. The invention of the duplex and quadruplex systems of telegraphy was mentioned. As a final step in this unit, a description was read to the class of the Central Telegraph Station in London where one hundred and fifty thousand messages a day are handled, and where very complex instruments, such as the printing telegraph, are in use.

II. MAKING MAGNETIC TOYS

Science projects may often be parts of a larger project such as a Christmas civic project. When the 6A class decided to send Christmas gifts to the children of the 6A grade in one of the schools in the poorer part of the city, the children asked if they could make some sort of toys in the science class to send with their other gifts. The class had just started the study of magnets and was much interested in them. Some of the children had seen a game for sale called "Fun with Magnetism," and thought that they might make something similar. The planning of this box of magnetic toys and experiments motivated the further study of magnets. Some of the children had played with a magnetic fish pond game. They suggested putting one of these games in each box, but finally decided to put the necessary materials in the box and let the children have the fun of making their own games. In planning what materials to include and how to write the directions, these questions arose: Of what kind of material can the fish be made? Of what can the horseshoe magnets be made? How can they be made? How can the magnet be made to pick up a paper fish? What substances does a magnet attract? They worked out the solutions to these various problems and were then able to get the necessary materials and write the necessary directions. They thought it very interesting to test a large variety of materials to see which ones are attracted

by a magnet; so they decided to include in the boxes small boxes containing bits of many materials so that the children could test them with a magnet.

They then suggested that if magnets were of any use they might make something useful for the boxes. The compass was discussed as the most important use of the permanent magnet. The compass was studied with the problem of making a compass in mind. They planned and made compasses of corks, wire, and magnetized sewing needles.

They then made a magnetic boat, based on the principle that the opposite poles of a magnet attract each other and that similar poles repel each other. The boat was made of a cork through which a magnetized needle was pushed. Paper sails were cut and pasted together to hide the part of the needle projecting above the cork. Colored paper strips were cut and pasted on the cork to represent the hull of the boat. The boat was then dipped in hot paraffin to make it waterproof. The boat could be made to come toward the magnet when one pole of the magnet was held near the sail and to go in the opposite direction when the other pole was held near.

Each box, when completed, contained the following: a bar magnet which was bought by the child who made the box, a box of iron filings with which to perform an experiment to show the magnetic field, a compass, the materials for a fish pond game, a magnetic boat, a box of materials to test, some nails, and several sewing needles. When each child had written a set of directions to put in the boxes, the class selected the best set. This set of directions was then taken to the printshop and the class set up the type and printed the copies as a part of the regular class work in printing. Labels for the boxes were also printed. Boxes were brought by the children and were covered with colored paper.

The directions which the class printed follow:

EXPERIMENT NO. 1

Suspend the bar magnet by a string so that it can turn freely. What position does it take when it comes to rest? The ends of the magnet are called the poles. The one which points north is called the north pole; the one which points south is called the south pole.

EXPERIMENT NO. 2

Test all the substances in the small box with your magnet. What substances are attracted by a magnet?

EXPERIMENT NO. 3

Put a needle on the table. Bring the magnet near it. The needle will jump to the magnet. This happens because the power of the magnet extends into the region around the magnet. This region is called the magnetic field. Lay the magnet on the table under a large piece of cardboard. Sprinkle iron filings on the cardboard and tap it gently. The filings will show you the lines of force in the magnetic field.

EXPERIMENT NO. 4

Sprinkle iron filings on a piece of paper. Rub the magnet back and forth beneath the paper. Does a magnet act through paper? Does a magnet act through glass or wood?

EXPERIMENT NO. 5

Touch one end of a nail to the magnet. Lower the nail into a pile of iron filings. Is a nail magnetized when one end touches a magnet? Does it lose its magnetism when the magnet is taken away?

EXPERIMENT NO. 6

Hold another nail under one pole of the magnet but not touching it. Lower the nail and the magnet until the end of the nail touches some iron filings. Is the nail a magnet when one end of the nail is near the magnet but not touching it?

EXPERIMENT NO. 7

The compass is made of a magnetized needle suspended so that it can turn freely. Find out which is the north and which the south pole of the compass needle. Hold the north pole of your bar magnet near the compass. Which pole of the compass needle does it attract? Which pole of the compass needle does the south pole of your bar magnet attract? The law of magnets is: Like poles repel each other; opposite poles attract.

EXPERIMENT NO. 8

Place the boat in a pan of water. Hold one pole of your magnet near the sail. What happens? Hold the other pole near the sail. You can make the boat come and go as you choose because there is a magnetized needle in the boat. Can you find out which pole of the needle is hidden in the sail?

EXPERIMENT NO. 9

In the large envelope you will find two steel knitting needles. To magnetize them rub them with one end of your magnet. Rub them always in the same direction. Then bend each of the steel needles into the shape of a horseshoe and you have two horseshoe magnets.

EXPERIMENT NO. 10

Tie each of the horseshoe magnets which you made in Experiment No. 9 to a stick by means of a long string. These are your fishing poles. Make more fish like the one in the envelope. You can play a game by trying to catch the fish with your fishing poles. The person who catches the most fish wins the game.

As a conclusion to this unit of work, the class planned and gave an assembly exercise in which they showed the other children

of the school their boxes and explained how everything in the boxes was supposed to be used and why everything worked as it did. The decision of the children last year to give a bazaar at Christmas time for the benefit of the University Settlement afforded an opportunity for carrying out similar projects. The children made, in their regular school classes, most of the things which they offered for sale at the bazaar. The science classes were asked to contribute something.

The sixth-grade children made sets of magnetic boats similar to those which the corresponding class of the year before had made. They also made boxes which contained an electromagnet designed for use with a set of building material such as Meccano or Struktiron. The box contained also a switch with which the current might be turned on or off, a dry cell, the wire necessary for connections, and directions for the use of the magnet. The science problems which had to be solved in this construction project were: How is an electromagnet made? How does an electromagnet differ from a permanent magnet? What determines the strength of an electromagnet? How is a switch made? This study of an electromagnet made it possible for the children to understand the very many applications of the electromagnet in bells, buzzers, etc.

III. WIRING A TOY THEATER FOR ELECTRIC LIGHTS

Many times work in other grades of the school offers opportunities for science projects. Last year the third-year class built a toy theater. The third-grade teacher asked the sixth-grade science class whether it would be possible for the class to light the theater with small electric lights. The sixth grade undertook the project. It was a very simple project as far as the actual work of putting in the lights was concerned, but many interesting problems arose in connection with it. The class had not studied the use of electricity for lighting purposes, and solving the many problems that arose helped them understand how houses are lighted. Tiny lamps had to be ordered. When miniature lamps were looked up in the catalog, they were found listed as follows:

MINIATURE INCANDESCENT LAMPS—CARBON FILAMENT

Candle-power	1	2	3	4
Voltage	2½	3½	4½	6
Price	$0.28	$0.28	$0.28	$0.33

MINIATURE INCANDESCENT LAMPS—TUNGSTEN FILAMENT

Candle-power	1	2	3
Voltage	2½	3½	6
Price	$0.45	$0.45	$0.50

Since the terms used here were not familiar to the children, this price list brought forth many questions: What is the difference between a carbon and a tungsten lamp? What does candle-power mean? What does voltage mean? Why are tungsten lamps more expensive than carbon lamps? Why are they called incandescent lamps? After the answers to these questions had been satisfactorily worked out, the class came back to the problem of ordering the lamps.

Some of the children recommended buying the carbon lamps because they are much less expensive than the tungsten lamps. Others of the class suggested that the tungsten lamps must be better than the carbon lamps in some way or no one would buy them. It was suggested that the tungsten lamps must give more light than carbon lamps of the same size. A comparison of the candle-power of the two showed that the 45-cent tungsten lamp gives no more light than the 28-cent carbon lamp. The children then suggested that it might take fewer cells to run the tungsten lamps than the carbon lamps. The voltages listed showed that this was not the case. One of the children happened to find an article in a recent magazine which explained why the government urged everyone to buy tungsten rather than carbon lamps during the war. Carbon lamps, it stated, consume three watts of electricity for every candle-power, while tungsten lamps consume only one and one-fourth watts per candle-power. The term "watt" was a new one and had to be explained. The class arrived at the conclusion that although it would take just as many dry cells to operate the tungsten lamps as the carbon lamps the cells would last much longer if tungsten lamps were used. They decided to order tungsten lamps.

The size of the lamps had next to be determined. What difference would it make whether six-volt or three-volt lamps were ordered? Since the third grade had specified that there be at least four lamps in the theater, the class decided that six-volt lamps would take too many cells. On the other hand, they feared that the two and one-half volt lamps would not give enough light. They

ordered the three-and-one-half volt lamps. The correct number of dry cells had to be ordered. The voltage of an ordinary dry cell was measured with a voltmeter and the number of cells needed for four three-and-one-half volt lamps was figured. The sockets for holding the lamps in position had to be included in the order.

A plan for connecting the lamps was then worked out. The children suggested that they be connected in series, and this plan was found to work satisfactorily. One or two of the children did the actual work of wiring. The others watched and offered suggestions from time to time. The children then planned and made a switch by means of which the lights could be turned off and on without disconnecting any of the wires. The switch was put in the circuit and tested. The theater was then carried down to the third-grade room and one of the sixth-grade children was chosen to explain to the children there how the lights could be turned on and off with the switch.

Using the knowledge the class had gained from this project, they next discussed the lighting of our houses with electric lights. How are the lights we use in our houses like the lights put in the theater? How are they different? Is the source of current the same? Are the lamps connected in the same way? What would be the disadvantage of connecting the lamps in a house in series? Why did the government urge the use of tungsten lamps as a means of conserving coal? Why are there fuses in connection with electric lights? Why do these fuses sometimes burn out? How are electric bills figured? These are some of the questions which were discussed. As a conclusion, the story of Edison's invention of the electric lamp and of the world-wide search for a substance which would make a suitable filament for the incandescent lamp was read.

The class this semester is starting on a similar project. The class has undertaken to wire the doll house, made and furnished by the second grade, for electric lights and for a doorbell.

Educational Writings

I. COMMENT ON CURRENT EDUCATIONAL PUBLICATIONS

The last volume of the Gary survey.—The volume dealing with the measurement of school results in Gary was prepared by Mr. Courtis.[1] It is a year behind the first volume in which the director of the survey summarized the results of this and the other investigations.

The present volume opens with the now familiar introduction in which the Gary system is described as an innovation full of suggestions. The system is once more said to emerge from the investigations which find it to be far from successful as an experiment which when "rightly observed and interpreted is both interesting and stimulating."

The rest of the book was prepared by Mr. Courtis who has come to be recognized by educational people as one of the most careful and reliable users of the measuring methods in evaluating school results. Mr. Courtis reports the facts found through the use of elaborate tests of handwriting, spelling, arithmetic, composition, and reading. He then takes up in a general chapter some considerations of the factors which determine school results, such as heredity, the pupil's degree of maturity, training, and other minor factors. One hundred and fifty pages of appendixes give the careful reader the data on which the report is based.

The author has summarized his findings better than anyone else can do it: "The general conclusion of the author is that the product of classroom teaching of the fundamentals is, at Gary, poor in quality and inadequate in amount; it approximates in character the product of the poorer conventional schools, and reveals in no particular the slightest indication that it has been affected either favorably or unfavorably by the enriched curriculum, or other special features of the Gary schools. The progress from grade to grade is relatively small, the final levels of achievement reached are comparatively low, and the differences between the results of simple and complex tests in any one subject increase progressively. The entire investigation reveals many and consistent evidences of careless work, imperfectly developed habits, and marked lack of achievement." [Page 384.]

It has long been the conviction of school men who have visited Gary that the situation is exactly what Mr. Courtis finds. This is the source of much of the

[1] STUART A. COURTIS, *The Gary Public Schools: Measurement of Classroom Products.* New York: General Education Board, 1919. Pp. xxii+532. $0.30.

skepticism which is abroad regarding the success of those schools. Mr. Courtis goes on in his concluding chapter to make it clear that he does not want his readers to infer too much from his findings. It is only fair to Gary and the survey to quote further from this final chapter. The following paragraphs are therefore to be read in connection with that just quoted:

"In other words, results of tests reveal conditions but do not show causes. While the results prove plainly that the products of classroom teaching in the fundamentals are poor, the reader should not allow his mind to associate in a casual relationship the fundamental theories of a modernized school and inefficient teaching. Neither should he be misled by 'explanations' of the results. It would be most unscientific, with an adequate explanation at hand, to assume that the effects noted are due to the operation of a remote and questionable cause. Present results prove merely that at Gary certain vital factors in school work have been neglected, but the reader should not decide what those factors are until he has read the other volumes of the report.[1]

"The writer does not believe that the present defects of administration are in the slightest degree inherent in the attempt to enrich the school curriculum or to modify school practice so that it will appeal to the interest of the child and satisfy the natural instincts of his developing life. Therefore, if this report should operate to retard the progressive movement of which the experiment at Gary is an expression, he would feel that a very great and needless injury had been done American education. Although when the investigation was undertaken, it was expected that decisive results would be secured, it must now be emphasized again and again that the effects of the newer ideals of education have not been measured, because at Gary these ideals are operating under such conditions that they play little or no part in determining the product of classroom teaching." [Pages 384–85.]

The comment which the present reviewer would add to the discussion is very brief. The Gary plan has evidently not included that which is most essential to the best common education. Whatever has been said by its advocates about the advantages of departmentalized instruction, about the advantages of associating high-school classes with elementary, about the intellectual stimulus that comes from work and play, must be liberally discounted. The best school is evidently one that pays more attention to teaching than does Gary. The machinery set up in Gary may be stimulating and interesting to the outside world, but it does not take care of children. In other words, whatever is done at Gary is external. The system does not get at the heart of matters. It has not placed its emphasis where it is necessary to place it if children are to be very well educated.

It will not convince school people to be told by anyone that the system is probably all right in its fundamentals, because school people believe that the fundamentals of education involve reading and other intellectual branches.

A book on the health of teachers.—Mr. Chancellor, who has written a number of volumes on school management and methods, turns his attention to the special

[1] See report on *Organization and Administration.*

problem of the health of teachers.[1] The first part of the book gives an account of a number of cases of the sort that would warn teachers that they must be intelligent about the management of their physical welfare. The second part of the book then contains a number of formulas directing their practice so as to avoid the difficulties and dangers exhibited in the first part.

One questions as one reads the first part of this volume the wisdom of emphasizing to such an extent the pathological side of life. One also wonders whether the health of teachers ought to be treated in a volume which tends to make it appear that the business of teaching is a special hazard. No one can deny the propriety of getting health problems before the public as widely as possible, but the teaching profession is by no means as open to nervous diseases and particular health difficulties as this book would seem at first reading to indicate. The author in his effort to make a strong case seems to have overdone the matter somewhat. Young and inexperienced teachers ought to be encouraged to teach normal hygiene and to think in terms of normal hygiene.

The last part of the book with its formulas of health rather than disease is very much more of a type to be recommended.

A college and normal-school text on the teaching of home economics.[2]—Home economics is a complex subject. The truth of this statement comes out very clearly when authors attempt to survey, as in the book here under review, all of the different aspects of home economics teaching.

The volume is divided into four major parts. The first part which covers eighty pages deals with general considerations regarding the place of women in society and some of the larger movements in society which affect women's occupations both in the home and in industry. Eighty pages are by no means enough to deal with this problem, and one must criticize the treatment as very brief and limited in its historical survey of the subject attempted. There is room here for a serious consideration of one of the major problems of modern civilization, and the somewhat superficial treatment of the matter given in these eighty pages is likely to leave the young woman who is devoting herself to home economics with a narrow view of her problem.

The second part of the volume, which covers one hundred and eighty pages, deals with the different units of the school system and the types of home economics which should be provided for these different units. The third part of the volume, which is of about the same length as the first, discusses the details of classroom methodology and the organization of classroom exercises. A brief last section, covering somewhat less than one hundred pages, gives bibliographies and a discussion of the training needed by the teacher.

The book is the first comprehensive effort to treat the problems of methodology in this field as they have been treated in the case of most of the other school

---

[1] WILLIAM ESTABROOK CHANCELLOR, *The Health of the Teacher*. Chicago: Forbes & Co., 1919. Pp. ix+307. $1.25.

[2] ANNA M. COOLEY, CORA M. WINCHELL, WILHELMINA H. SPOHR, and JOSEPHINE A. MARSHALL, *Teaching Home Economics*. New York: Macmillan Co., 1919. Pp. xii+555. $1.80.

subjects. It aims to deal not only with high schools but also with elementary schools, and a section is devoted to the discussion of junior high schools.

The book will undoubtedly take its place as a textbook, and it is very suggestive in raising a number of problems, but it reveals very clearly the chaotic character of home economics teaching at the present time and it exhibits with unusual clearness the lack of treatment in these courses of some of the fundamental economic subjects which undoubtedly ought to be included in the training of girls. There is no emphatic recognition of the fact that home economics must be based upon a new type of social study in the schools. There is no reaching out into the curriculum to modify the general tone and temper of either the high school or the elementary method of dealing with girls. The natural sciences are treated as proper correlates of home economics, and certain of the other subjects are briefly mentioned as also related to this type of instruction, but the thoroughgoing treatment of the whole matter of the education of girls is left to the reader's imagination and, in the opinion of the present reviewer, is not at all adequately dealt with.

A book for Sunday school teachers.—There has been a vigorous movement in recent years to carry over into the Sunday school field the findings and principles which have developed a new technique in public schools and guided teachers in their training and in their practical dealings with pupils. Mr. Betts has been one of the prolific writers in the field of general education. He turns now with his new professional connections to a discussion of the special problems that arise in the teaching of religion to children.[1] The spirit of this book is that of the most progressive students in the field of religious education. Courses of study should be carefully worked out and graded. They should be comprehensive so as to use material other than the biblical material which has always constituted the chief subject of instruction in the Sunday school. With all of this expansion of religious teaching there must be a thoroughgoing devotion to the immediate religious ends of Sunday school instruction. Teachers must prepare themselves specifically with this religious end in view and must focus their work directly upon this which is the foremost problem.

Something of the breadth of the author's view with regard to the material of instruction may be gathered from the following paragraphs which are typical of his whole treatment:

"The sources of material available for the religious education of childhood are therefore as broad as the multiform ways in which God speaks to men, and as rich as all the great experiences of men which have left their impress upon civilization. Besides the beautiful story of God creating the earth, we have the wonderful miracle of constant re-creation going on before our eyes in the succession of generations of all living things.

"Besides the deathless accounts of the heroism of such men as Elijah, Daniel, and Paul, we have the immortal deeds of Livingstone, Taylor, and Luther. Besides the womanly courage and strength of Esther and Ruth, we

[1] GEORGE HERBERT BETTS, *How to Teach Religion*. New York: Abingdon Press, 1919. Pp. 223. $1.00.

have the matchless devotion of Florence Nightingale, Frances Willard, Alice Freeman Palmer, and Jane Addams. Besides the stirring poetry of the Bible, and its appealing stories, myths and parables, we have the marvelous treasure house of religious literary wealth found in the writings of Tennyson, Whittier, Bryant, Phillips Brooks, and many other writers.

"The material for religious teaching lying ready to our hand is measureless in amount, and must be wisely chosen. In addition to material from the Bible, which always must be the center and foundation of the religious curriculum, should be taken other material from nature; from biography, history, and life itself; from literature and story; from science and the great world of objects about us; from music, and from art. All of this multiform subject-matter must be welded together with a common purpose and so permeated with the religious motive and application that it will touch the child's spiritual thought and feeling at many points of his experience." [Pages 110–11.]

A book of lectures.—Dr. Winship has long been known in all parts of the United States as a popular lecturer before teachers' organizations and as an editor whose influence through the *Journal of Education* has reached into every state and most of the school systems of the country. He has now brought together under the striking title, *Danger Signals for Teachers*,[1] those practical pedagogical lessons which he has set forth in his lectures and writings.

The book is a series of exhortations dealing with all sorts of topics. There is a discussion of the taxpayer and his ideas about education. There is a warning to teachers not to pick out their star pupils and overdo the appeal to such pupils in the classroom. The awkward squad is described as a part of the school situation. The teacher is warned not to be too autocratic in classroom methods and not to nag pupils.

These few examples will give some idea of the variety of topics treated. Each one is commented on to the extent of two or three pages, much in the editorial style which Dr. Winship has cultivated in his journal.

French education.—In order to promote a closer intimacy between American and French civilizations the French Ministry of Public Instruction and the Fine Arts has co-operated in the bringing out of a volume[2] which sets forth in the form of extracts from French authors the tendencies of present-day French education. The book is the joint work of a French educator of distinction and an American author who spent a number of years making himself intimately acquainted with French schools.

The volume consists of a series of extracts from French political and educational writers. Most of the topics that are of current importance in the development of French education are touched upon, beginning with the problems of secularization of the French schools, dealing with the matter of the training of

[1] A. E. Winship, *Danger Signals for Teachers*. Chicago: Forbes & Co., 1919. Pp. xi+204. $1.25.

[2] *French Educational Ideals of Today*. Edited by Ferdinand Buisson and Frederic Ernest Farrington. Yonkers-on-Hudson, New York: World Book Co., 1919. Pp xii+326. $2.25.

teachers and their place in society, and dealing with the subject-matter of instruction in the schools and with the method of presentation.

On the whole, the authors have succeeded fairly well in making a unit out of this collection of extracts from the writings of many different people. There will be some difficulty, however, in using this book as an exposition of the modern French schools. One must have some background of information with regard to the leading movements that have brought the French schools to their present condition before one can have a full appreciation of the significance of the passages that are quoted. One is tempted to suggest that it would have been better to have put in more explanatory material so that the American reader unacquainted with the French schools might have a more vivid notion of those phases of French education which are likely to be unfamiliar to the American teacher and school officer. As a part of a general library, however, in which this explanatory material about French schools is accessible, these extracts from French writers will be most useful and give a type of first-hand information about the people of France which probably would not be as vividly presented if the book were an explanation of the system rather than a series of quotations.

The book is certainly to be welcomed as one further exhibition of the effort on the part of European nations and America to come into intellectual sympathy with each other. We shall undoubtedly have in the years to come more examples of international explanations of educational systems, and these will serve the very useful purpose of making us aware of our own peculiarities and at the same time giving us an opportunity to get by imitation and critical study valuable suggestions from the school systems of other civilizations.

Outline of courses in nature study.—The Francis W. Parker School is traditionally connected with the nature study movement which some years ago emanated from the Cook County Normal School and related institutions. Volume V,[1] which is the fifth year book of the school, contains a series of outlines of material in nature study for all of the grades from the first through the high school. The courses in the upper years of the high school are differentiated into courses in the special sciences. In the lower grades the material has to do with the garden, with chicken raising which has been undertaken in the school, with the simple principles of physiography and mechanics, with electricity, and with the study of geology and topography.

The book is illustrated with a number of cuts that indicate the concrete character of all of this work. There are composition lessons and reading lessons suggested as part of the nature study course, and numerous laboratory exercises are described in sufficient detail to be taken over by other schools.

This book together with a number of others that have appeared recently indicates a revival in a somewhat modified form of the nature study movement. The first enthusiasm for that movement spent itself when it was found that the science material which was carried over into the grades was too difficult in character to be taken up with interest by the children. The characteristic fact about

[1] *Francis W. Parker School Year Book: The Course in Science*, V, July, 1918. Chicago: Francis W. Parker School. Pp. 168. $0.40.

the newer attempts is that the material is very much better graded. The appeal to children in the lower grades especially is in a form that they can understand and in which they can have genuine personal interest.

Pamphlets on industrial education.—The Department of Labor of the United States has issued a series of bulletins[1] dealing with various problems that arise in industrial plants which aim to train their workers. These pamphlets are notable for two reasons. They indicate, in the first place, that the leaders of industry are becoming fully aware of the necessity of careful methods of teaching their workmen. The time was in American industry when workmen were expected to pick up knowledge of their trades without any systematic instruction either from their fellow workers or from the owners of the plant. It is steadily being borne in on the industries of this country that it is more economical to train workers than to allow them to pick up in an accidental way skill in the industries. The second significant fact which comes to light with these pamphlets is that the federal government in all of its executive departments is becoming increasingly educational in its mode of attacking problems. The Department of Labor, as one of the newest departments, bids fair through such pamphlets as these to become as deeply absorbed in the business of education as has the Department of Agriculture or the Department of Commerce through its Bureau of Standards.

It is not possible here to give any detailed account of the various pamphlets which are listed. A glance at their titles will indicate something of the scope of this effort. In the first of the pamphlets which deals with this problem under the title *Training in Industrial Plants* there are a few sentences which convey so clearly the purpose of the whole enterprise that they may be quoted.

"In many factories the general practice followed has been that a new man 'picked up' his trade as best he could by imitating those workmen with whom he became associated whenever the opportunity presented itself. In some cases, where such a workman had a friend among his associates, he received more information than if he had been left alone. But as a rule no one took interest in him, for nobody was definitely assigned to train him. The class of men so affected constitutes a large proportion of the group of shifting workers. After failing to make good on one job they travel to another, going through the same procedure, stealing a point here and there, until they gradually acquire boldness enough to pose as mechanics, and usually they succeed if they possess enough nerve to 'bluff it' and 'get by.' This, besides being a bad practice, is a serious economic waste.

"Where the foreman has been called upon to do training in conjunction with his '57 varieties' of duties, the efforts which he puts into training are far from adequate. He has, as a rule, no definite method, nor does he appreciate the real

[1] Bulletins of the Department of Labor, United States Training Service: No. 14, *Training in Industrial Plants;* No. 16 *Training in the Men's Suit and Overcoat Industry;* No. 18, *Industrial Training in the Overalls Industry;* No. 19, *Training for Shirt Makers;* No. 21, *Training in the Shoe Industry;* No. 22, *Courses of Instruction in Piano Making;* No. 24, *Industrial Training for Foundry Workers;* No. 25, *Courses of Instruction for Workers in Cotton Mills;* No. 26, *The Foreman.* Washington: Government Printing Office, 1919.

value of training. As a matter of fact, too much is expected of foremen when they are asked to perform this very important task. Experience has shown that very few are fitted for it. Their whole development has been along other lines, and their efforts have been more concerned with getting out production—often by driving their men. Where foremen have been required to train, it has always been found advisable to give them special instruction.

"Results are equally as bad where men are taken from the manufacturing department to break in new help, for here again there is no definite procedure. Training with these men is incidental and often an annoyance, as it interrupts their 'regular' work and occasionally causes bad feeling on their part.

"Men who have had many years' experience in trade work do not readily recall all the difficulties they experienced when they were learning. Names of tools, knowledge of materials and equipment as well as an understanding of processes have been familiar to them so long that they are quite apt to assume everyone knows them. The tendency which these men show to drift from the real teaching to display knowledge on some special but unrelated point is quite common.

"The result is that in any of these cases above mentioned there is little real training, and what knowledge is acquired is obtained by the learner largely through his own efforts or observation."

Following this statement of the difficulties which have existed in the past is a strong plea for systematic training of workmen through qualified instructors.

A survey of the amusements of a city.—Much has been written in recent years about the effect of motion pictures on the community. The evils that follow the exhibition of unwholesome pictures have been commented upon by social workers and educators. Rev. J. J. Phelan has attempted in a volume[1] of three hundred pages to give a complete statement of the motion-picture industry and its patrons in the city of Toledo. On the whole, the exhibit that he makes is one which leads to the conclusion that there ought to be a reform in the direction of control and censorship of these pictures. At times his criticism of moving-picture concerns seems to be extreme. For example, he charges these concerns with a lack of knowledge of their own operations and of the general situation in the city with regard to the costs and profits of the concerns. It is hardly to be wondered at that any business enterprise should be ignorant of all of the social consequences of its operations. American business has not yet learned to make systematic investigations, and Dr. Phelan ought to be very charitable with any group of entertainers who have not yet made a survey of their doings. In fact, communities have up to this time been very little aware of the importance of doing what he himself has undertaken in this volume.

It may be well to call attention to a number of the suggestions which he makes.

"1. The increase of parental responsibility, as seen in intelligent and sympathetic guidance, regarding the evils of promiscuous, excessive, and indiscriminate

[1] J. J. PHELAN, *Motion Pictures in a Typical City*. Toledo: Little Book Press, 1919. Pp. 292. $2.00.

attendance at picture-shows, burlesque and vaudeville—care to be exercised against 'over-control' as well as 'under-control.'

"2. The possible creation of a Department of Public Morals as a branch of the City Government. This department to supervise all of the public amusement places of the city; co-operate with the various charitable, philanthropic, social, religious, and educational agencies, and enforce the present City Ordinance regarding the attendance of unchaperoned minors at theatres. To give it legal status, this department could be made a branch of the Department of Public Welfare or Public Safety.

"3. The immediate appointment of a local Board of Film Censors to co-operate with the Ohio Board of Film Censors as to the type of pictures most desirable for children. The number, personnel, and all matters of detail to be worked out carefully by the Social Service Commission of the Inter-Church Federation, Catholic and Jewish churches. The censorship of all picture posters and advertising schemes outside of the theatres and picture houses is also necessary.

"4. The insertion in the local press (each week) of the bulletins issued by the Committee of Better Films for Young People.

"5. The development of a Children's theatre in the city wherein clean, wholesome, and proper plays may be shown to both children and parents. A local theatre might be secured for the proper days." [Pages 120–21.]

The further passages in which he recommends reforms are so much in the spirit of these items quoted that it is perhaps unnecessary to enter into a detailed discussion of them.

The second part of the book gives an account of the various places of entertainment provided in the city of Toledo which are not under the control of commercial concerns. This part of the book is evidently intended to serve as a guide to citizens who are seeking to avoid some of the evils that attach to the motion pictures described in the first part of the book.

A book on physical education through games.—The ordinary city boy has been deprived, by the character of his environment, from participation in many of the typical activities which a generation ago were common among children. The city boy does not know many of the simple games and forms of exercise which his father practiced every day in the larger and freer spaces that existed in the small town or in the country. Two physical training teachers[1] of the Detroit public schools have united their efforts in describing a number of outdoor and indoor exercises which will restore in some measure to the city boy the life of an earlier generation. How a boy should jump, how he should compete in various athletic events, how he should unite with his fellows in feats of strength and skill are set forth in sufficient detail so that any teacher can use the book as a guide for exercises for both boys and girls. There are tables of records which should be achieved by boys and girls of different ages, and the book describes a

[1] N. H. Pearl and H. E. Brown, *Health by Stunts*. New York: Macmillan Co., 1919. Pp. xi+216. $1.30.

plan for rewards for athletic competitors which will stimulate a use of these exercises throughout any city system.

Practical exercises for training in the sciences.—The Committee on Education of the War Department had an opportunity during the training of the soldiers for the war to try out a number of plans for practical training. For this purpose books[1] were prepared giving series of exercises which departed widely from the material to be found in a conventional textbook. Most of this material is arranged for use in schools of the grade of high schools, but any elementary teacher who is interested in finding vital exercises for pupils in the grades who are measuring or for those who are interested in physics or mechanics will gain much by a perusal of the material here collected.

A series of exercises on citizenship.—The Committee on Special War Activities of the National Catholic War Council has produced a booklet[2] intended to contribute to the training of children in American institutions. There are discussions in three or four pages devoted to each topic of such matters as nationalization, taxation, insurance, methods of preventing frauds, military service, health, the making of laws, etc. The book is different from an ordinary book on civics in its mode of treating these topics, and the topics themselves indicate that the scope of the book is much broader than that of the ordinary course on citizenship now provided in the schools.

The fact that this material comes from a committee on war activities is indicative of the immediate motive which lies back of the preparation of the material, but the material is useful in times of peace even more than it would have been had the war continued.

That the church in the supervision of its schools has seen the importance of preparing a body of material of this sort is most encouraging and furnishes new evidence of the fact that the American people are thoroughly aroused to the importance of a study of American institutions by the younger generation.

A report on ungraded rooms.—Some years ago the city of Los Angeles employed a psychologist for the purpose of giving special study to the children in the schools of that city who were backward. In 1917 a survey of the intelligence of pupils in the schools was made. Since that time the teachers and the supervisory officers have worked out with very large freedom in the choice of subjects a curriculum for the use of the ungraded or special classes. The results of their work are briefly reported in a pamphlet[3] of thirty-six pages. This pamphlet describes

[1] *Storage Batteries for Trucks*, pp. 82. *The Engineer School at Camp Humphreys*, pp. 76. *Problems in Physics*, pp. 154. *Surveying*. Washington: War Department, Committee on Education and Special Training, 1919

[2] *The Fundamentals of Citizenship*. Reconstruction Pamphlets, No. 6, June, 1919. Washington: Committee on Special War Activities, National Catholic War Council. Pp. 92.

[3] *First Annual Report by Division of Psychology: Ungraded Rooms in Los Angeles City Schools*. Los Angeles City School District, June, 1919. Pp. 36.

the organization of these classes, indicates what is being done in the way of physical training of the children, and also gives an account of a unique experiment that is being tried in the reading classes. Here routine tests are being employed as materials both for diagnosing the progress of the children and for furnishing them with the exercises to be used in their classroom work. These tests are modified forms of the completion and association tests and of other familiar types of tests which have been used in dealing with subnormal and normal children. By means of their use teachers can keep in constant touch with the progress made by the children, and they can also discover the particular difficulties exhibited by each child. The teachers in the schools are reported to be sufficiently trained in many cases now so that they make their own tests and carry on the work in this way without depending for all of the material upon their supervisors.

A book dealing with the active method in education.—For a long time educational leaders of certain types have felt that training for performing life's activities is to come from actual performance of life's activities. As a consequence they are at present assiduously seeking life-situations in which pupils can participate in one way or another. Within such situations they are attempting to segregate "activity-units," variously called projects, problems, exercises, topics, etc., and to organize them into a system of education that is both complete and sequential.

The present volume[1] attempts to present the *theory* of this active method of education. It makes no attempt to picture or to discuss actual practices as these have developed so abundantly throughout the country. Neither is there presented any organized or connected series of the life-situations, activity-units, etc., that would naturally be called for by the practical worker who wishes to draw up educational plans that utilize the active or project method. The volume deals with general educational principles illustrated here and there with actual examples of practice.

The author assumes that every intellectualized purposeful activity is a project. Thus he includes as projects practically every type of exercise now included in our schools: simple questions of every type, questions relating to complex situations, problem-questions, type-studies, project-problems, problem-projects, construction projects, practical arts projects, physical training, aesthetic exercises whether for appreciation or performance, all of the intellectual topics involved in all of the school subjects, etc. In other words, he simply presents us with all of the old familiar types of education in the unfamiliar garb of a new and, it must be confessed, rather vague and certainly ill-defined terminology. Had he defined "project" in the much narrower but generally accepted sense in which it is used by those practical school men who are actually organizing much of education on that basis (Stimson, for example), his volume, while not dealing with the whole of education, would have been of far more practical service.

---

[1] MENDEL E. BRANOM. *The Project Method in Education* Boston: Richard G. Badger, 1919 Pp. 282. $1.75.

II. CURRENT PUBLICATIONS RECEIVED DURING THE PAST MONTH

A. GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

BRANOM, MENDEL E. *The Project Method in Education.* Boston: Richard G. Badger, 1919. Pp. 282. $1.75.

COOLEY, ANNA M., WINCHELL, CORA M., SPOHR, WILHELMINA H., and MARSHALL, JOSEPHINE A. *Teaching Home Economics.* New York: Macmillan Co., 1919. Pp. xii+555. $1.80.

COURTIS, STUART A. *The Gary Public Schools: Measurement of Classroom Products.* New York: General Education Board, 1919. Pp. xxii+532. $0.30.

ELSOM, J. C., and TRILLING, BLANCHE M. *Social Games and Group Dances.* Philadelphia: J. B. Lippincott Co., 1919. Pp. 258.

MORSE, ANSON DANIEL. *Civilization and the World War.* Boston: Ginn & Co., 1919. Pp. xiv+222. $1.50.

B. BOOKS PRIMARILY FOR ELEMENTARY-GRADE TEACHERS AND PUPILS

BENSON, E. F. *David Blaize and the Blue Door.* New York: George H. Doran Co., 1919. Pp. viii+217.

BLAISDELL, ALBERT F., and BALL, FRANCIS K. *Pioneers of America.* Boston: Little, Brown & Co., 1919. Pp. vii+154. $0.65.

Courses of Study: *Arithmetic; Drawing and Industrial Art; English; Geography, History and Nature Study; Music and Physical Education.* Duluth, Minnesota: Duluth Public Schools, 1919.

PEARL, N. H., and BROWN, H. E. *Health by Stunts.* New York: Macmillan Co., 1919. Pp. xi+216. $1.30.

Progressive Music Series: *Primary Song Book for Sight Reading.* Silver, Burdett & Co., 1919. Pp. 64.

Supplemental Problems in Arithmetic for Use in Rural Schools. Los Angeles: Division of Educational Research, Los Angeles City School District, 1919 (third edition). Pp. 54.

WILSON, E. N. *The White Indian Boy.* Revised and edited by Howard R. Driggs. Yonkers-on-Hudson, New York: World Book Co., 1919. Pp. xi+222. $1.00.

C. BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

BAYS, ALFRED W. *Business Law.* New York: Macmillan Co., 1919. Pp. ix+311. $1.40.

CLELAND, ETHEL (compiler). *Five Hundred Business Books.* Washington: American Library Association, 1919. Pp. x+72.

DAUDET, ALPHONSE. *Contes Choisis.* Edited by Walter D. Head. New York: Macmillan Co., 1919. Pp. xvi+201. $0.60.

Debate Index. Pittsburgh: Carnegie Library of Pittsburgh, 1919 (third edition) Pp. 116. $0.30.

DOOLEY, WILLIAM H. *Applied Science for Metal-Workers.* New York: Ronald Press Co., 1919. Pp. x+479. $2.00.

DOOLEY, WILLIAM H. *Applied Science for Wood-Workers.* New York: Ronald Press Co., 1919. Pp. x+457. $2.00.

GEHRS, JOHN H. *The Principles of Agriculture.* New York: Macmillan Co., 1919. Pp. x+594. $2.25.

MCEWAN, OLIVER. *McEwan's Easy Shorthand.* Chicago: McEwan Shorthand Corporation, 72 W. Adams Street, 1919. Pp. 80. $1.00.

SCOTT, WALTER. *Rob Roy.* Edited by Eugene R. Musgrove. New York: Macmillan Co., 1919. Pp. xliii+496. $0.40.

YOUNG, EDITH. *Student's Manual of Fashion Drawing.* New York: John Wiley & Sons, Inc., 1919. Pp. vii+107. $2.00.

D. PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION AND SIMILAR MATERIAL IN PAMPHLET FORM

Recent issues of the Bureau of Education:

Bulletin No. 35, 1919—*The Junior College.*

Bulletin No. 40, 1919—*Work of the Bureau of Education for the Natives of Alaska, 1917–18.*

Bulletin No. 49, 1919—*Education in Parts of the British Empire.*

Bulletin No. 67, 1919—*Monthly Record of Current Educational Publications.*

Use and Preparation of Food. Bulletin No. 35, Home Economics Series No. 3, October, 1919. Washington: Federal Board for Vocational Education. Pp. 268.

E. MISCELLANEOUS PUBLICATIONS

American Private Schools, 1919–20. Boston: Porter E. Sargent, 14 Beacon Street, 1919. Pp. 768.

LATTIMORE, ELEANOR L., and TRENT, RAY S. *Legal Recognition of Industrial Women.* New York: Industrial Committee, War Work Council of the National Board of the Young Womens Christian Associations, 1919. Pp. xiv+91.

REESE, ALBERT M. *Wanderings in the Orient.* Chicago: Open Court Publishing Co., 1919. Pp. 81. $1.00.

SINGER, IGNATIUS. *The Rival Philosophies of Jesus and of Paul.* Chicago: Open Court Publishing Co., 1919. Pp. 347. $2.00.

BAUSCH & LOMB BALOPTICONS

Write for Catalogue
BAUSCH & LOMB OPTICAL CO.
000 St. Paul Street, Rochester, N. Y.

Combined Balopticon for Lantern Slides and Opaque Objects, $150

Bausch & Lomb Optical Co.

NEW YORK CHICAGO WASHINGTON ROCHESTER, N. Y SAN FRANCISCO LONDON

Leading American Makers of Photographic Lenses, Microscopes, Projection Apparatus (Balopticons), Ophthalmic Lenses and Instruments, Photomicrographic Apparatus, Range Finders and Gun Sights for Army and Navy Searchlight Reflectors, Stereo-Prism Binoculars, Magnifiers and other High-Grade Optical Products.

The Quarterly Journal of Speech Education

Official organ of the National Association of Teachers of Speech

New developments in the field of speech are many and important. Progress in that field is being made so rapidly now that we believe it is more important this year than ever before that teachers, principals, and superintendents keep up with speech literature and speech reforms. The Quarterly is devoted to the following phases of speech education: Argumentation and Debate; Reading; Voice Training; Speech Correction; Dramatics and Pageantry; Speech Composition; Oratory and Extemporaneous Speaking. It contains articles on pedagogical and research problems, reports of conferences and conventions, and reviews of all the new books that are of interest in any phase of speech education. A circular of information and sample copies will be furnished on request. Subscription price, $2.00 a year.

The Collegiate Press
GEORGE BANTA PUBLISHING COMPANY
MENASHA, WISCONSIN

Our Literary Heritage

Pupils are entitled to a familiar acquaintance with their inheritance of literature—the masterpieces that have stood the test of time and proved their interest and value to generations of children in many different lands.

In no other series of readers has this body of literature been edited so carefully, thoughtfully, and sympathetically as in that recently prepared by Professors Baker and Thorndike entitled

EVERYDAY CLASSICS

For Grades 3 - 6:

	(Price until January 1)
Third Reader	$0.48
Fourth Reader	.56
Fifth Reader	.56
Sixth Reader	.60
(with teachers' manuals)	

For Grammar Grades and Junior High Schools

Seventh Reader: American Life and Ideals	.72
Eighth Reader: An Introduction to Literature	.72
(with teachers' manuals)	

From "Wynken, Blynken, and Nod" and "The Owl and the Pussy-Cat" to "Treasure Island" and Tennyson's "Ulysses," the literature in these readers parallels and stimulates your children's growth from naive receptivity to aspiring adolescence.

The Macmillan Company

New York Boston Chicago
Dallas Atlanta San Francisco

GEORGE BANTA PUBLISHING COMPANY, MENASHA, WISCONSIN